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A Message from Our Company

Last year, we celebrated the 10th anniversary of MSD for Mothers and renewed our commitment to accelerate progress in reducing maternal mortality globally as part of our company's priority to extend access to solutions that address unmet medical needs. MSD for Mothers is an essential component of our goal to advance health equity through social investments and this report – *Evidence for Impact 2022* – highlights the latest findings and results of applying a data-driven and evidence-based approach to helping save women's lives.

The COVID-19 pandemic has worsened maternal health outcomes and exacerbated disparities between and within countries. Low-and middle-income countries, witnessed major disruptions to

essential maternal health services.¹ For example, 40% of African countries reported interruptions to sexual, reproductive, maternal, newborn, child and adolescent health services, with 36 African countries reporting up to a 25% disruption in services.² In the United States, according to a Guttmacher Institute survey, 19% of women delayed or cancelled visiting a health care provider for sexual and reproductive health care, or had trouble getting their contraceptive method, during the first year of the pandemic – with women of color and women who are lower-income more likely to experience barriers to this care.³

In addition to the pandemic, other local and global crises are widening inequities in maternal health.⁴⁵

If the global community does not effectively anticipate, prepare and respond by building more resilient health systems, the gaps could continue to grow.

Women who face systemic inequities because of income, age, education, race, ethnicity, geography or culture continue to be the most underserved and disproportionately affected by poor maternal health outcomes. More research is needed to determine the impact of these inequities on women's lives and care experiences and – more importantly – how to overcome these differences in order to achieve the vision of a world where everyone has access to safe, high-quality and respectful maternal health care. Translating research on the persistent disparities in



maternal health into action requires re-thinking the types of data we need and building more inclusive methodologies to capture what matters and what works. An important step is systematically generating information and insights on women's lived experiences of care across the continuum of their pregnancy, childbirth and post-birth journey – and then acting on what we learn.

We are pleased to share Evidence for Impact 2022, our third compendium of research and evaluation supported by MSD for Mothers and generated by dozens of our diverse collaborators from leading academic centers, advocacy groups, nongovernmental organizations and others. More than 170 publications, including 40+ peer-reviewed journal articles, published since mid-2020 are included. This report is organized into three priority areas of inquiry, each examined with a lens to health equity: 1) integrating women's experiences of care into quality improvement efforts, 2) understanding why women are dying to prevent future death and disability, and 3) improving the quality of care that women receive – wherever they seek care.

We have made two changes since our earlier editions. First, we have broadened our focus to include a variety of sources, not limited to peer-

reviewed publications. It is important to identify ways to share data and findings in shorter time frames, often before scientific publication, so that policymakers, public health practitioners and health providers can use these insights to inform ongoing efforts to help save lives. Next, in keeping with our commitment to action based on evidence, *Evidence for Impact 2022* includes practical tools that our collaborators have developed to put research findings into practice. We encourage readers to consider adopting these and hope they are useful in enhancing their own programs.

We are grateful to the thousands of women whose experiences are reflected and the hundreds of individuals whose work is represented in these pages. We thank them for their outstanding efforts to better understand fundamental issues that have a major impact on the health and well-being of women and girls around the world.

Carmen Villar MAGfiebet



Carmen VillarVP of Social Business Innovation
MSD



Dr. Mary-Ann Etiebet Lead, MSD for Mothers & AVP for Health Equity, MSD



Introduction

Over the past two and half years, the COVID-19 pandemic has set the world back on many global health goals, including reducing maternal mortality.⁶ The pandemic has also highlighted inequities in access to quality health care that have persisted in maternal health for decades.⁷

During the past 20 years, maternal mortality has declined considerably – dropping by more than 40% globally. However, women living in the world's poorest countries continue to be at much greater risk. The 10 countries with the worst maternal mortality rates are also among the world's 50 poorest countries. A woman in Sierra Leone is 10 times more likely to die than a woman in South Africa. And a woman in South Africa is about 15 times more likely to die than a woman in France.

Women who are medically underserved, those who are poor, immigrants, from racial and ethnic minority groups – regardless of country or region – have disproportionately worse maternal health outcomes. In the United Kingdom, a recent report found that Black women are four times more likely than White women to die in childbirth. In the United States, the Centers for Disease Control and Prevention reports that Black, American Indian and Alaska Native women are up to three times more likely than white women to die from pregnancy and childbirth-related causes, and that a Black woman

with a college degree is more likely to die than a white woman who did not finish high school. A study published in *JAMA* found that the maternal mortality ratio in the United States rose by 33% in 2020, beginning in April, corresponding with the onset of the COVID-19 pandemic, with the most significant increases among Hispanic and Black women.

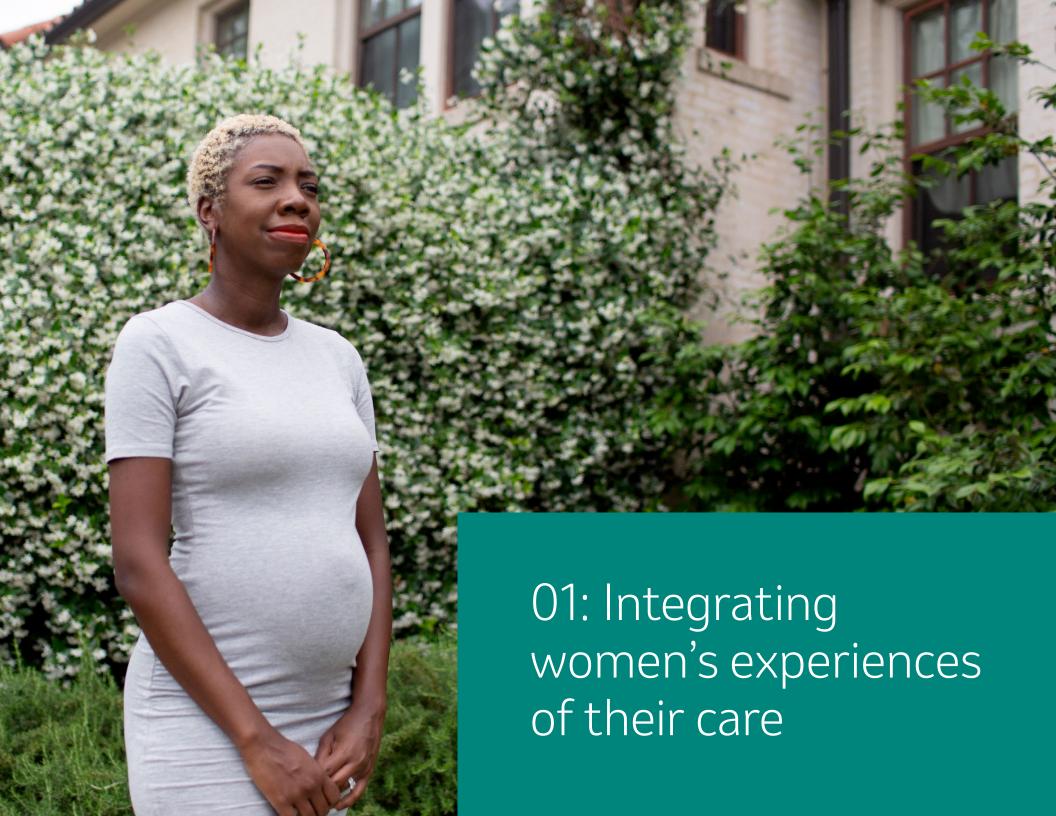
As part of our company's priority to extend access to solutions that address unmet medical needs, MSD for Mothers aims to help create a world where no woman has to die while giving life by taking a comprehensive and collaborative approach to sustainably strengthen health systems to deliver safe, high-quality, respectful maternity care. Providing this model of care depends on addressing both the clinical and social factors that influence health. Setting and meeting a high bar for maternity care is fundamental to improving health outcomes for all and reaching broader health equity goals.

Many of the publications featured in this report address the challenges of achieving more equitable outcomes in maternal health care – from efforts to make lifesaving products more affordable and accessible to women in resource-limited countries, to recommendations from participatory research findings to address the impacts of systemic racism in health systems.

The compendium is organized into three sections that reflect priority areas for action to improve maternal health outcomes:

- 1. Integrating women's experiences of their care
- 2. Understanding why women are dying
- 3. Improving the quality of maternity care

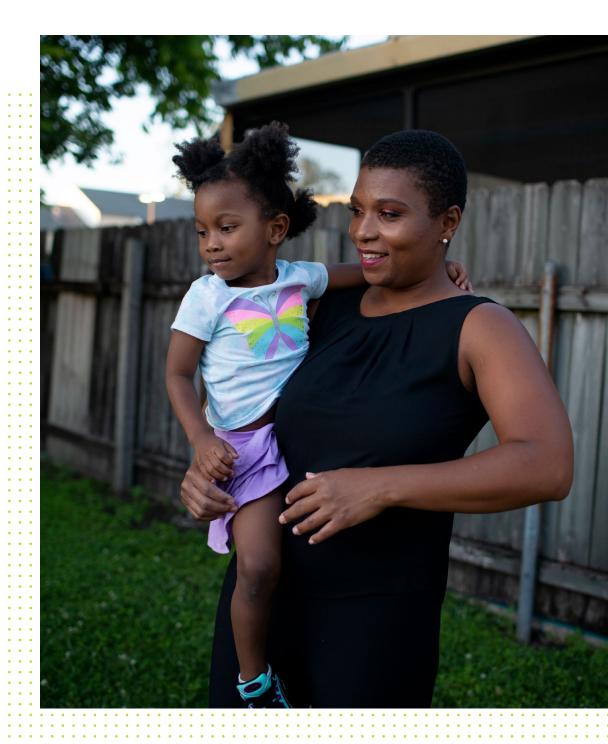
The compendium aggregates leading-edge research and the application of new research methodologies that shed light on critical questions and longstanding challenges in maternal health. Included are insights ranging from the potential of digital solutions to elicit feedback from women about their care to the power of capacity building to help local health providers deliver quality maternal health and family planning services closer to the people they serve.



Women's perspectives and experiences before, during and after childbirth provide critical insights on how to strengthen maternity care and design systems that work for all women. A woman's experience of the care she receives is an integral dimension of quality care and should be a guiding force in developing and implementing equitable solutions to maternal health challenges.

That is why participatory and inclusive research should be more widespread. These approaches support more systematic integration of the knowledge and preferences of people based on their lived experiences, especially those who, historically, have been excluded from traditional research. At the same time, health providers must be accountable to the communities they serve by both asking for feedback and responding to it. Health systems should have formal channels to incorporate this information as a routine part of improving quality throughout the continuum of care - for all women everywhere. Maternity care that meets women's needs and treats both patients and health providers respectfully is more likely to lead to greater satisfaction with care as well as better and more equitable health outcomes.1213

The publications in this section explore the beliefs, perceptions, preferences and personal accounts of women's engagement with maternal health care systems. They provide qualitative data on women's and health care workers' care experiences and explore the socio-cultural factors contributing to women's health-seeking behavior and health outcomes.



8 Integrating women's experiences of their care MSD for Mothers Evidence for Impact 2022

Research Question:

What are Black women's experiences of disrespect and abuse in maternity care in the **United States?**

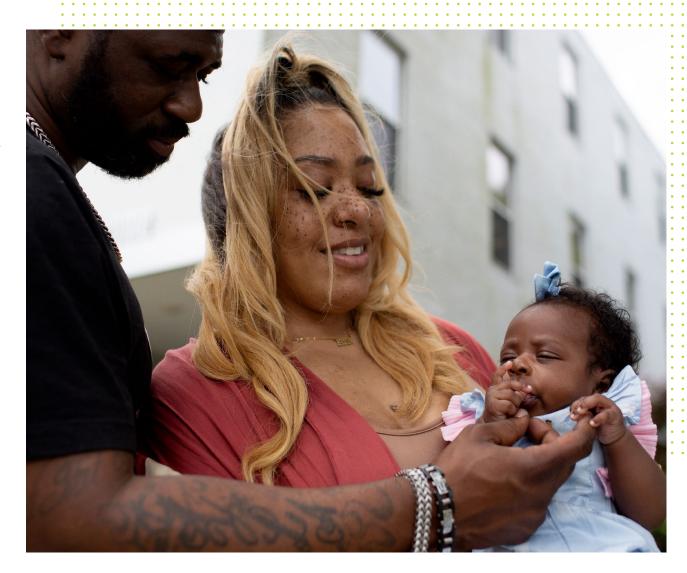
Black Mamas Matter Alliance. (2022). Black Women's And Birth Workers' Experiences Of Disrespect And Abuse In Maternity Care. Black Mamas Matter Alliance

Context

Black women in the United States are three times more likely to die due to pregnancy related causes and significantly more likely to suffer from lifethreatening complications during childbirth than white women.¹⁴ Disrespect and abuse experienced during childbirth has gained global attention since it was first formally documented by human rights groups in 2007. Through global literature review, researchers have identified seven categories of disrespect and abuse: (1) physical abuse; (2) sexual abuse; (3) verbal abuse; (4) stigma and discrimination; (5) failure to meet professional standards of care; (6) poor rapport between providers and patients; and (7) health systems constraints.1516

Research Contributions

MSD for Mothers provided funding to the Black Mamas Matter Alliance (BMMA), a national network of Black women-led reproductive justice organizations, for the development of a report titled Black women's and birth workers' experiences of disrespect and abuse in maternity care. The report describes findings from an exploratory, qualitative research study of Black women's experiences during pregnancy and childbirth in Atlanta. The study was conducted in 2018 in collaboration with the Averting Maternal Death and Disability program of the Columbia University Mailman School of Public Health, the Center for Black Women's Wellness.



the Atlanta Healthy Start Initiative and other local community-based organizations. The study sought to understand Black women's and birth workers' perceptions of the disrespect and abuse they experienced while receiving and providing care during pregnancy and childbirth.



Key Findings

Researchers found significant overlap between what women experienced and what birth workers witnessed. Both perspectives are synthesized in four main sections:

1. Women's prenatal care-seeking preferences and the challenges they faced:

- Women described geographic convenience, colocation of several social services in one building and cost and insurance coverage as practical considerations that informed their care seeking behaviors.
- Women valued continuity of care as well as racial and cultural concordance. They wanted providers they could relate to and build relationships with.
- Women sought information from a range of sources. They were most influenced by recommendations from family, friends and trusted medical providers, followed by accounts of the facility's reputation or online reviews. For women who had previously given birth, past experiences were an important consideration for future care.
- Women reported feeling overburdened by the frequency and quantity of prenatal care appointments. Lack of transportation and long wait times were also barriers to care.

2. Women's expectations and desires for pregnancy and childbirth:

Women shared their expectations and desires for their birth, including nurturing hospital environments, compassionate providers and natural births with minimal interventions. Within these expectations, however, women

shared a fear of adverse outcomes and death from complications potentially arising across medical interventions.

3. Women's experiences with disrespectful and abusive care:

Women faced widespread mistreatment before, during and after childbirth in the form of harsh language, ineffective communication, lack of informed consent and confidentiality,

dismissal of concerns and pain and racism and discrimination.

4. Women's positive experiences:

Women appreciated clear communication from their providers. They reported more trust when providers introduced themselves and explained what was happening to them throughout their pregnancy and childbirth in a way they could understand.



Researchers' Insights

- Researchers stated that, overall, the many forms of abuse experienced by women in their study were inextricably linked to their status as Black women. Women felt that providers judged them more harshly and made racist assumptions about them because they were Black.
- 2. They highlighted that women in the study were acutely aware that their experiences with disrespect and abuse manifested from a medical system which continually devalued their lives due to racism. They found women were also blamed for the profound physical and mental impact that such devaluation had on them.
- 3. Researchers noted that such experiences not only made women feel deeply disrespected, but also shaped how they perceived the birthing experience through a lens of mistreatment regardless of providers' motivations and intentions. Perceived experiences with racial discrimination and prior negative experiences heavily impact patients' mistrust of the health care system.
- 4. Listening to and valuing the lived experiences of Black women by health providers has the power to transform the quality of maternity care. Interventions aimed at improving effective communication, promoting respectful and compassionate interactions and reducing implicit bias have the potential to improve trust and satisfaction and work towards more equitable and respectful care experiences.



Why it Matters

Disrespectful and abusive care experiences create mistrust between pregnant people and their providers, reinforce negative perceptions of the health care system and limit health-seeking behavior. Regardless of providers' motivations and intentions, these experiences shape how women perceive and reflect on their birthing experiences. Concerted efforts to improve how Black women are treated during pregnancy and childbirth are an important step towards addressing maternal health disparities within the United States.



Research Question:

What is the feasibility of utilizing mobile technology to collect patient-reported outcomes?

Al-Shammari, I., Roa, L., Yorlets, R. R., Akerman, C., Dekker, A., Kelley, T., ... & Ljungman, D. (2019). Implementation of an international standardized set of outcome indicators in pregnancy and childbirth in Kenya: utilizing mobile technology to collect patient-reported outcomes. *PloS one*, 14(10), e0222978.

Context

Patient-reported outcome measurement is essential to improve the quality of health care. Validated survey instruments which capture outcomes that are most important to a patient strengthen health systems' understanding of patients' perspectives around care provision and health outcomes. However, many health systems do not routinely collect, report, review or act on this type of information. Systematically collecting and learning from women's experiences of maternity care across the pregnancy journey is vital for improving the quality of maternity care for all.

Research Contributions

PharmAccess Foundation – a non-profit organization that aims to expand access to equitable care among rural and low-income populations in sub-Saharan Africa –leverages digital health innovations, such as MomCare, to improve maternal health care. MomCare is a digital platform that helps women and their health care provider(s) track, finance and improve the quality of the maternal health journey.

PharmAccess assessed the feasibility of collecting patient-reported outcomes data about antenatal, delivery and postnatal care using the platform.

The organization followed a cohort of 204 women



in Nairobi, Kenya starting in their third trimester through delivery and until six weeks postpartum and asked, via surveys on a mobile platform, about the facility-based maternity care they received at their visits. Fourteen patient-reported outcome measures were selected from the 26 indicators proposed by the <u>International Consortium of Health Outcomes Measurement Pregnancy and Childbirth Standard Set</u>.

Key Findings

- 1. Completion was highest for the first survey (92%), completed by administrative staff at the hospital. For patient-completed surveys, completion was highest after the first antenatal care visit (85%) but dropped for the remaining surveys covering a second antenatal care visit, delivery care and postnatal care (38%).
- 2. Half or more of the women were "very satisfied" with antenatal care (65.6%), delivery care (50.6%) and postnatal care (60%).
- 3. Nearly half of women reported symptoms of depression during antenatal care and postnatal care.
- 4. During the postnatal visit, most women were exclusively breastfeeding (85.7%), some were choosing a combination of breastfeeding and formula or other liquids (11.4%) and few were using formula or other liquids exclusively (2.9%).

Researchers' Insights

- 1. Answering sensitive questions via text messages may facilitate more honest feedback than traditional in-person interviews or household surveys. In this study, nearly half of women reported symptoms of depression during the antenatal care and postnatal care period.
- 2. The use of a mobile platform and patient liaison officers, who followed up with women who missed one or more appointments across the pregnancy journey, increased awareness of patients' health seeking behaviors and ensured high patient retention in reporting on the care they received and their health outcomes.
- 3. Patient-reported outcomes data enable researchers and policymakers to understand patients' needs, care-seeking behavior and self-reported outcomes. This is critical to informing effective policy to drive progress to improve health outcomes. Identifying policymakers interested in value-based health care to incentivize use of patient-reported outcomes for benchmarking will be key to facilitate adequate allocation of resources.



Why it matters

"Adapting the ICHOM set for SMSsurveys resulted in such a simple and effective way of collecting data. We can break taboos by asking the questions that really matter and we make sure that the voice of the mother is heard by everyone in the health care system. It's a key component in the shift to valuebased pregnancy care."

—Julie Fleischer, Manager Value Based Care, PharmAccess Foundation

Research Question: What do midwives want?

White Ribbon Alliance. (2022). What Women Want: Midwives' Voices, Midwives' Demands. White Ribbon Alliance

Context

According to the United Nations Population Fund (UNFPA), 82% of maternal deaths could be prevented if midwives were available to everyone. UNFPA's recent analysis indicates that in addition to saving lives, fully qualified and regulated midwives who are integrated within and supported by interdisciplinary teams can deliver around 90% of essential sexual, reproductive, maternal, newborn and adolescent health interventions. Despite their importance, midwives still make up less than 10% of the global health care workforce. And health care systems' lack of investment in supporting midwives leads to many leaving the midwifery workforce entirely.17

Data aimed at understanding and improving workplace satisfaction among health providers are essential to supporting the health workforce and improving care experiences, as studies have shown that provider dissatisfaction and burnout is often a contributing factor to poor quality and disrespectful care. 18 19 Similarly, many health providers – especially those working in settings with limited resources - report that they lack the tools they need to consistently deliver high-quality care.²⁰

Research Contributions

In 2019, White Ribbon Alliance (WRA) launched the What Women Want: Demands for Quality Healthcare from Women and Girls campaign. The campaign asked more than one million women and girls in 114 countries "what's your one request for maternal and reproductive health care?" Nearly 145,000 women and girls asked for increased, competent and better supported health care workers, with "nurses and midwives" most often mentioned. Nurses and midwives were among the top five requests from all women and girls and among the top three requests for women aged 20 to 24.

In late 2021, WRA and the International Confederation of Midwives joined forces to launch

Midwives' Voices, Midwives' Demands, the first mobilization of midwives for the PUSH campaign - a decade-long global movement for women and the midwives who protect and uphold their rights and bodily autonomy. Midwives Voices, Midwives Demands aimed to hear directly from midwives about their needs and wants, including what matters most to them, and bring that knowledge and pressure to bear on policymakers as they consider midwifery investments. The campaign relied on both trust mobilizers and a newly designed digital chatbot, developed by WRA with support from MSD for Mothers and Praekelt.org, to expand the reach and availability of the campaign.





Key Findings

Over 57,000 midwives from 101 countries across the world responded to the survey. Key demands were categorized as follows:

1. More and better supported personnel [33% of respondents]

The most-often-cited, and most critical, subdemand was proper remuneration, including increased salaries with strong benefits, as midwives are likely to leave the profession when they are not appropriately compensated with a living wage.

2. Supplies and functional facilities [33% of respondents]

Midwives demanded access to basic needs such as space, equipment, clean water and medicines to treat the women in their care. Specific supplies often requested included ultrasound machines, personal protective gear, gloves, nutritional supplements for mothers such as folic acid and iron and delivery kits.

3. General health and health services [11% of respondents]

This demand included requests related to the health of midwives' clients, and more generally women and children around the world.

4. Professional development and leadership [11% of respondents]

These requests were related to training and promotion, with midwives primarily expressing hope to improve their positions in life through ongoing education.

5. Respect, dignity and non-discrimination [7% of respondents]

This category reflected midwives' desire to be valued and included as qualified, competent and critical health workers - by patients and colleagues. as well as in national policies.

6. Power, autonomy and improved gender norms and policies [5% of respondents]

Requests for autonomy, independent practice and recognition came from midwives across the world.



Researchers' Insights

- 1. Midwives around the world desire to work in an environment where they have access to basic needs that should be afforded to any health provider. More and better supported personnel as well as supplies and functional facilities — far outweighed any of the other categories. Policymakers can better support midwives by prioritizing investments in midwife staffing and pay, as well as basic commodities and supplies.
- 2. Responses such as "I want to see every pregnant woman delivered safely" and "I want to ensure that there are no complications before or after delivery" - demonstrate the commitment of midwives to providing high-quality professional and lifesaving care.
- 3. Midwives want to do their jobs, and they want to do them well, but they must be enabled in order to succeed.



From evidence to impact

"A lot of midwives want to speak up, but the patriarchal systems don't allow it - there are hierarchies in place, and midwives are reprimanded if they try and change the status quo. But when midwives speak up, in numbers too large to ignore, they can change the course of history."

—Angela Nguku, Deputy CEO, White Ribbon Alliance

As a result of the Midwives Voices, Midwives Demands campaign, Kenya approved its first ever Nursing and Midwifery national policy that formally recognizes and incorporates midwifery into the national health care system, leading to an expanded and clear scope of practice for midwives. In Malawi, the government doubled the number of midwives it employs and elevated the status of midwives by creating a Chief Midwifery Office in Malawi's central hospitals. Nigeria is following suit, committing to place a midwife in each of the state's 274 primary health care facilities.20

15 Integrating women's experiences of their care

Tools to raise awareness among women and their families of urgent maternal warning signs

"A woman knows her body. Listening and acting upon her concerns during or after pregnancy could help save her life."

— Dr. Wanda Barfield, Director of the Centers for Disease Control and Prevention's Division of Reproductive Health

In 2020, the Centers for Disease Control and Prevention (CDC) launched the Hear Her campaign to raise awareness of the 15 urgent maternal warning signs of health problems that could arise during pregnancy and the postpartum period, when most maternal deaths occur.²¹ Hear Her is designed to improve communication between birthing people and their health care providers. 22 23

The Hear Her campaign shares the stories of women who have experienced pregnancy-related complications, features resources to help people who are pregnant or postpartum share their concerns and underlines the importance of listening to women to ensure they get the care they need.

Building on the initial success of the campaign, the CDC is working to release culturally appropriate resources for American Indian and Alaska Native communities, including the stories of five American Indian women who experienced pregnancy-related complications. Plans are also underway to explore the possibility of expanding Hear Her to additional countries so that women around the world are equipped with the information they need to have lifesaving conversations with their providers.



CDC Hear Her. Personal Stories

Tools to integrate women's lived experience in programs and advocacy

MoMMA's Voices is a first-ever coalition of maternal health patient advocacy groups in the United States. Established in 2018, with support from MSD for Mothers, the coalition has since trained hundreds of women and family members who have experienced a pregnancy or childbirth complication or loss to advocate for improved maternal health policies and clinical care.

MoMMA's Voices aims to ensure that the voices of women with lived experiences are integrated into all efforts to improve maternal health and, to that end, developed a new tool - Lived Experience Integration™ Scorecard - to help organizations assess whether they are meeting this goal. Preliminary results from perinatal quality collaboratives and maternal mortality review

committees across the country show that while these groups are listening to those with lived experiences, more work is needed to fully integrate and act on the information they receive. 24

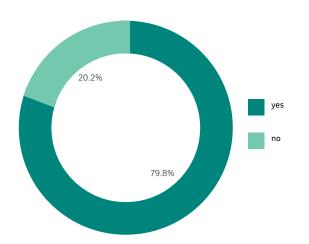
Sample Results from the Lived Experience Integration™ Scorecard

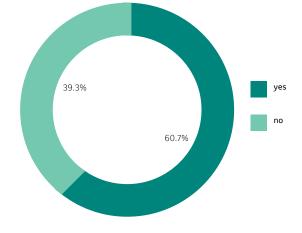
135 organizational assessments conducted, with an average score of 39% in how well they integrate women's voices into all maternal health efforts.

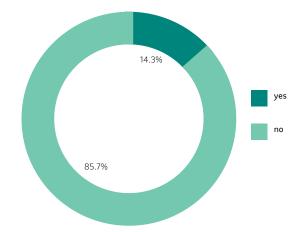
We have had those with lived experiences share their story

We have those with lived experience sit on work groups, committees, etc.

We have onboarding training for those with lived experience to be effective in QI work







Scorecard Results | MoMMA's Voices (mommasvoices.org)

PUBLICATIONS

Section 01: Integrating women's experiences of their care

PEER-REVIEWED JOURNAL ARTICLES

- 1. Al-Shammari, I., Roa, L., Yorlets, R. R., Akerman, C., Dekker, A., Kelley, T., ... & Ljungman, D. (2019). Implementation of an international standardized set of outcome indicators in pregnancy and childbirth in Kenya: utilizing mobile technology to collect patient-reported outcomes. PloS one, 14(10), e0222978.
- 2. Buser, J. M., Boyd, C. J., Moyer, C. A., Ngoma-Hazemba, A., Zulu, D., Mtenje, J. T., Jones, A. D., & Lori, J. R. (2020). Operationalization of the Ecological Systems Theory to Guide the Study of Cultural Practices and Beliefs of Newborn Care in Rural Zambia. Journal of Transcultural Nursing, 31(6), 582-590.
- 3. Buser, J. M., Moyer, C. A., Boyd, C. J., Zulu, D., Ngoma-Hazemba, A., Mtenje, J. T., Jones, A. D., & Lori, J. R. (2020). Maternal knowledge of essential newborn care in rural Zambia. Health Care for Women International, 42(4-6), 778-793.
- 4. Buser, J. M., Moyer, C. A., Boyd, C. J., Zulu, D., Ngoma-Hazemba, A., Mtenje, J. T., Jones, A. D., & Lori, J. R. (2020). Cultural beliefs and health-seeking practices: Rural Zambians' views on maternal-newborn care. Midwifery, 85.
- 5. Buser, J. M., Munro-Kramer, M. L., Veliz, P., Zhang, X., Lockhart, N., Biemba, G., Ngoma, T., Scott, N., & Lori, J. (2020). How Maternity Waiting Home Use Influences Attendance of Antenatal and Postnatal Care. SSRN Electronic Journal.
- 6. COosthuizen, S.J., Bergh, A.M., Silver, A., et al. (2022). The COVID-19 pandemic and disruptions in a district quality improvement initiative: Experiences from the CLEVER Maternity Care programme. South African Family Practice: Official Journal of the South African Academy of Family Practice/Primary Care. 64(1), e1-e12.
- 7. Oosthuizen, S., Bergh, A., Silver, A., Malatji, R., Mfolo, V., & Botha, T. (2022). Maternity healthcare providers' self-perceptions of well-being during COVID-19: A survey in Tshwane Health District, South Africa. African Journal of Primary Health Care & Family Medicine. 14(1)
- 8. Parellada, C. B., Boas, I. M., Nielsen, H. S., SÃ, rensen, B. L., & Lund, S. (2020). <u>User patterns of the Safe Delivery</u> App; explorations from a cluster randomized controlled trial in Ethiopia. Journal of Health Informatics in Developing Countries, 14(1).

- 9. Beck, D., Veliz, P. T., Munro-Kramer, M., Ngoma, T., Scott, N., Kaiser, J. L., Musonda, G., & Lori, J. R. (2021), Home Birth in Rural Zambia: The Role of Intimate Partner Violence and Autonomous Decision-Making. Journal of Midwifery & Women's Health, 66(2), 256-264.
- 10. Usmanova, G., Gresh, A., Cohen, M. A., Kim, Y. M., Srivastava, A., Joshi, C. S., Bhatt, D. C., Haws, R., Wadhwa, R., Sridhar, P., Bahl, N., Gaikwad, P., & Anderson, J. (2020). Acceptability and Barriers to Use of the ASMAN Provider-Facing Electronic Platform for Peripartum Care in Public Facilities in Madhya Pradesh and Rajasthan, India: A Qualitative Study Using the Technology Acceptance Model-3. International Journal of Environmental Research and Public Health, 17(22), 8333.

WHITE PAPERS, REPORTS, CONFERENCE ABSTRACTS, TECHNICAL RESOURCES

- 1. AWHONN. (2021). Post-birth warning signs education program.
- 2. Black Mamas Matter Alliance. (2022). Black Women's And Birth Workers' Experiences Of Disrespect And Abuse In **Maternity Care**
- 3. Center for Disease Control and Prevention. (2022). Conversation guide and palm card for pregnant or recently pregnant women. Hear Her Campaign
- 4. Center for Disease Control and Prevention. (2022). Conversation guide and pal card for families, friends and partners. Hear Her Campaign
- 5. Center for Disease Control and Prevention. (2022). Urgent maternal warning signs education materials. Hear Her Campaign
- 6. Feeley, D., & Torres, T. (2020). The Role of Racism as a Core Patient Safety Issue. Healthcare Executive, 35(1):58-61.
- 7. Girl Effect and Women Deliver. (2020). Going Online for Sexual and Reproductive Health.
- 8. MoMMA's Voices. (2021). Moms call for Improved Readiness, Provider Education and Communication. MoMMA's Voices Champions Training Center.
- 9. MoMMA's Voices. (2022). Lived experience integration scorecard.

10. White Ribbon Alliance. (2022). What Women Want: Midwives' Voices, Midwives' Demands, White Ribbon Alliance

SELECTED ARTICLES, OPINIONS AND WEBINARS

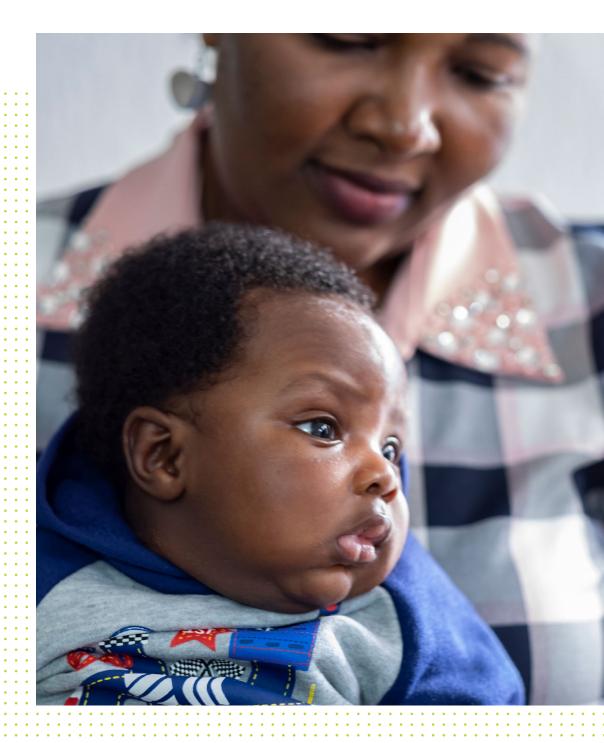
- 1. Devex editor. (2020). The digital health revolution: Will women be left out? Devex
- 2. Etiebet, M., & Panjabi, R. (2020). How we stop systemic racism from killing Black mothers. USA TODAY.
- 3. Heinzelman, J. (2020). <u>Does COVID-19 misinformation</u> transcend borders?: Taking a temperature on common myths. Medium.
- 4. Heinzelman, J. (2020). What are they thinking? Insights into COVID-19 knowledge, risk perception, and compliance in Kenya & India. Medium.
- 5. Institute for Healthcare Improvement. (2020) Supporting New Mothers in the Time of COVID-19. Institute for Healthcare Improvement.
- 6. Institute for Healthcare Improvement. (2020) Changing Assumptions About the Dangers of Hypertension in Pregnant Women. Institute for Healthcare Improvement
- Klatt, D. (2021). Growing the family planning market by asking consumers what they want. Medium.
- 8. Marcelle, E. (2022). "Do No Harm" Checklist Makes Care Safer by Design. Institute for Healthcare Improvement.
- 9. MDMOM Program. (2021). Patients as Partners in Maternity Care: Baltimore Mothers Share Their Birth Experiences [Video]. YouTube.
- 10. Nigeria Health Watch. (2020). Nigeria: Caesarean Sections in Nigeria - Thoughts, Belief Systems and Perceptions. all Africa.
- 11. Nigeria Health Watch. (2020). RICOM3 helps Nigerian women take ownership of their pregnancy journey; Here's how.



Health providers, policymakers, women and families need timely, comprehensive, inclusive and accurate information about where, how and why women are dying related to pregnancy and childbirth so they can prevent future loss of life. Unfortunately, data on the true burden and causes of maternal deaths in LMICs are often limited and unreliable. Countries rely on estimates and statistical models that are subject to error and do not include the full picture of why a woman died during pregnancy, childbirth or the postpartum period.²⁵ The lack of data on women who give birth at home approximately 3 in 10 women in LMICS - is even more pronounced.²⁶

Maternal death reviews, often referred to globally as Maternal and Perinatal Death Surveillance and Response (MPDSR), are recognized as an effective strategy to help reduce maternal mortality and address disparities. ²⁷ A well-functioning surveillance system supports a country's efforts to determine why a woman died from complications of pregnancy and childbirth and steers decision-makers, donors and others toward evidence-based and data-driven ways to strengthen the health system.

The publications in this section examine how maternal death reviews and surveillance data can provide critical information to inform prevention strategies and improve the quality of clinical care.



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Research Question: Why are women dying while giving birth in Nigeria?

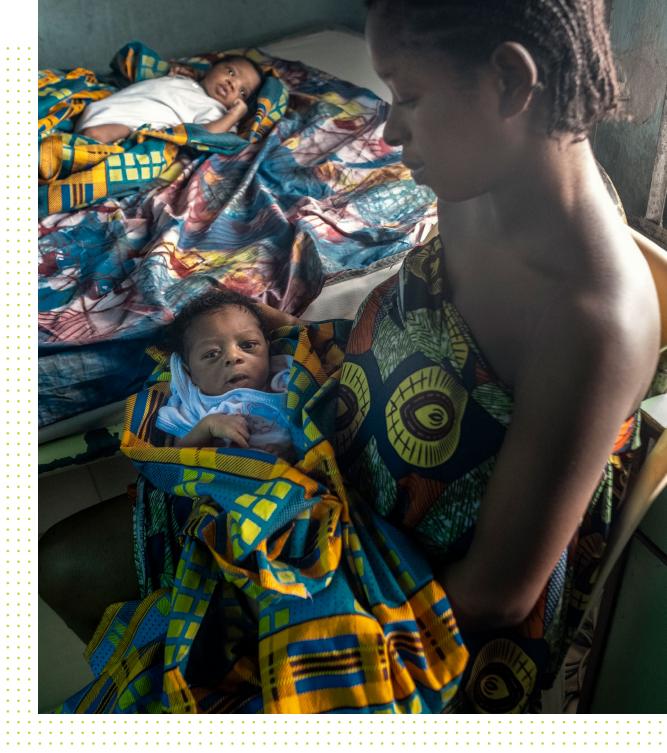
Nigeria Health Watch. (2020). Why Are Women Dying While Giving Birth In Nigeria? Nigeria Health Watch.

Context

In Nigeria, more women die each year from complications of pregnancy and childbirth than any other country in the world, recently surpassing India which is nearly twice as populous. Nigeria also has one of the highest maternal mortality ratios, ranking fourth globally and accounting for 20% of all maternal deaths. With more than 800 deaths per 100,000 live births and limited progress in lowering these figures, the country is far from achieving reductions toward the global target of 70 deaths per 100,000 live births.²⁸ A major reason for Nigeria's poor record on maternal health is that two-thirds of women do not give birth in health facilities and more than 60% give birth without the assistance of a skilled birth attendant.²⁹

Research Contributions

In January 2019, a consortium, including Africare, Nigeria Health Watch and EpiAFRIC was established to implement an 18-month community-informed maternal death review effort. The Giving Birth in Nigeria program, supported by MSD for Mothers, was conceptualized to provide an inquiry into the reasons pregnant women were dying in communities and to pilot a community accountability mechanism for maternal deaths. The purpose of the Why Are Women Dying While Giving **Birth in Nigeria?** Report was to raise awareness of the high maternal mortality burden in Nigeria, particularly the high prevalence of maternal deaths in communities, as routine surveillance of maternal deaths in Nigeria does not include identifying and reviewing deaths that occur outside a health facility.



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Key Findings

The review was carried out in six states representing each geopolitical zone in Nigeria and provided insights into the diverse cultures, attitudes and beliefs that influence women's health-seeking behaviors.

- Bauchi State: Younger women rely on the decision-making role of older women like mothers and mothers-in-law. They are the most influential people in the lives of younger women, acting as gatekeepers, and should be engaged to foster better maternal health-seeking behavior.
- 2. Bayelsa State: The high level of trust in Traditional Birth Attendants (TBAs) is due in part to the poor interactions that women report around interacting with the formal health system. TBAs are particularly popular because they live in the communities they serve and are very familiar with the women they serve.
- 3. Ebonyi State: There is a widespread perception among women in Ebonyi State that only women with complications ever need to visit a health facility. One in seven women sees the health facility as a last resort in seeking maternal care.
- 4. Kebbi State: The cultural influence of the man as the key decision maker and the aversion for male health providers exert a strong influence on the health-seeking behavior of women in communities and this ultimately affects maternal health outcomes.
- **5. Lagos State**: Significant reliance on faith-based maternal health care over facility-based maternal health care has been attributed, in

part, by some of the women to the unpleasant treatment received from both nurses and doctors. A reliance on religious beliefs contributes to health-seeking behaviors that place faith-based centers before health facilities when it comes to seeking maternal health care.



Researchers' Insights

In the report, researchers put forward the following recommendations to address the findings of the study:

- Traditional and religious leaders are the most influential people in communities as they function as cultural guides to women in communities. They must be involved to foster better maternal health-seeking behaviors.
- 2. State governments must commit to building upon socio-cultural structures to accelerate accountability for maternal deaths at the community level through community leadership and to advocate for the adoption of safe practices in maternal health care.
- 3. TBAs are trusted by women in local communities, and so they must be better equipped and trained to identify danger signs in pregnancy and refer women to health facilities.
- 4. Health education must be prioritized and facilitated via a bottom-up approach from the household unit to the community level, up to the state level and on a national scale to support women to make better health-seeking decisions, which will lead to better maternal health outcomes. The media has a key role in

passing evidence-based messages via radio, TV, newspapers and other media consumed by community members.



Why it matters

The Giving Birth in Nigeria program went beyond collecting data on maternal deaths by engaging in advocacy activities to raise awareness and encourage women to seek and utilize facility-based care. The evidence gathered has provided a more comprehensive framework to improve the surveillance of maternal deaths in communities and underscored the importance of implementing legislation that ensures that the MPDSR system incorporates maternal deaths that occur outside of health facilities.

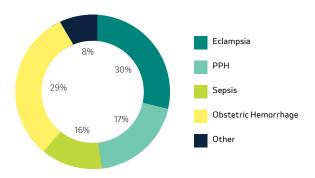
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Using data to focus Nigeria's quality improvement efforts

In support of Nigeria's commitment to reduce maternal mortality, the World Health Organization, in collaboration with the Nigeria Federal Ministry of Health, implemented an electronic Maternal and Perinatal Database for Quality, Equity and Dignity. More than 50 public and private referral hospitals across the country have been routinely collecting maternal and perinatal data since September 2019 to guide government action in improving the guality of maternity and perinatal care. Approximately 70,000 cases were reported on the platform in the first year of implementation.

The Lancet published analyses of the data, outlining how the electronic database has enabled health facilities to 1) identify which factors contribute to poor quality care and 2) use the data to inform high-impact, short-term and long-term maternal mortality reduction strategies. The Federal Ministry of Health is currently adopting and institutionalizing the program into the country's existing reporting systems for quality of care.

Primary Causes of Maternal Death



Tukur, et al. (2022). Quality and outcomes of maternal and perinatal care for 76,563 pregnancies reported in a nationwide network of Nigerian referrallevel hospitals. The Lancet.

Avoidable factors contributing to maternal contributing factors to maternal death (n = 909).

Avoidable factor* n (%)
Patient oriented factor
Delay in woman seeking health care641 (70.5)
Patient's refusal of treatment of admission
Facility level factor
Delay in appropriate referral522 (57.4)
Lack / delay of transport from home to health care facility 235 (25.8)
Lack of facilities, equipment or consumables150 (16.5)
Delay in receiving care from medical staff109 (12.0)
Health services and communication breakdown
Lack of medical expertise, training or education76 (8.3)
Lack of human resources46 (5.1)

*More than one factor can be selected for each death; 105 women did not have any contributing factor to death

Tukur, et al. (2022). Quality and outcomes of maternal and perinatal care for 76,563 pregnancies reported in a nationwide network of Nigerian referrallevel hospitals. The Lancet.

"This initiative has been an eye-opener for health facility managers. We can easily get a snapshot of the current causes of severe maternal morbidity and mortality, track the changing dynamics in the referrals to our various tertiary health institutions, and make quick decisions to address the identified gaps. The Federal Ministry of Health is delighted with the MPD-4-QED Programme, and we shall do the needful for the sustenance and improvement of the program. The recent journal publication is proof that data can be generated responsibly in the Nigerian system to guide the assessment of our movement toward achieving Sustainable Development Goal 3."

—Dr Kamil Shoretire, Head/Inspectorate Division, For Department of Hospital Services, Federal Ministry of Health, Nigeria

Addressing inequities in preventing the global leading cause of maternal deaths

MSD for Mothers collaborative approach is undertaken with the goal of improving access to quality maternal health care, including access to quality medicines, and has been informed by consensus recommendations from the for Women and Children. Because postpartum hemorrhage - or excessive bleeding after childbirth - is the number one driver of maternal mortality, especially in low- and middle-income countries, MSD for Mothers has taken a comprehensive approach to addressing this serious medical condition. Our efforts to address postpartum hemorrhage are informed by a health system strengthening approach and identifying possible solutions to challenges through human centered design. 30 31 32 33

Our aim is to identify, support and advance evidencebased practices for effectively, safely and sustainably introducing new solutions as part of routine standard of care and in accordance with guidelines. We have invested in new innovations and research including clinical trials, studies to assess the quality of medicines, research on uterotonic use at country level and the translation of normative recommendations into policy and practice in support of safe and appropriate adoption of solutions to prevent postpartum hemorrhage into health care delivery systems. Our collaborations have focused on:34

- 1. Supporting the translation of normative guidelines into policy and practice at a national level through the development of comprehensive resources, educational tools and job aids
- 2. Training and mentorship for health care workers and procurement managers to support safe and appropriate uterotonic use and improvements in supply chains
- 3. Assistance in exploring innovative financing for new maternal health medicines
- 4. Promoting respectful care through amplifying women's voices and supporting their choices through health literacy

Health inequities are often exacerbated by the inability to access quality-assured medicines. MSD for Mothers is investing in country-level implementation research and supporting processes to build capacity of local institutions to introduce innovations and enhance decision making around the use of new medicines, including costeffectiveness studies, and exploring the challenges and potential solutions to support safe introduction. 35 36

At a global level, we prioritize shared learning, supporting global conferences and workshops and disseminating evidence on the experiences of our collaborators most recently through our support of a supplement in International Journal of Gynecology & Obstetrics on postpartum hemorrhage prevention and management. 37

These investments in addressing postpartum hemorrhage are a key part of MSD for Mothers broader strategy to improve the quality of maternal health care.

The following three analyses add to the evidence base for the safe and appropriate use of uterotonics (medicines to prevent the onset of PPH). The first two studies compare oxytocin - the standard therapy for the prevention of PPH - and heat-stable carbetocin - an alternative PPH therapy that does not require cold storage and transport - with respect to additional clinical outcomes. The third examines the proper use and perceived quality of oxytocin.

Research question: What is the comparative effect of heat-stable carbetocin versus oxytocin on post-delivery hemoglobin level?

Finding: Based on an analysis in one of the CHAMPION trial sites in India, pre-delivery hemoglobin and postpartum blood loss were not significantly different between use of heat-stable carbetocin and oxytocin. [14]

Research question: What is the association between the duration of third stage labor and postpartum blood loss in women receiving oxytocin or heat-stable carbetocin?

Finding: There was no statistically significant difference between use of oxytocin and heat-stable carbetocin in terms of the length of the third stage of labor and amount of blood loss. [8]

Research question: What is the knowledge around oxytocin - the usage, storage practices and perceived quality of oxytocin used by health providers who directly administer oxytocin for the prevention of PPH across Nigeria?

Finding: Among health providers who directly administer oxytocin in Nigeria, there is poor knowledge of proper oxytocin storage, and approximately 50% of the study participants administered doses above the 10IU recommended for PPH prevention. However, participants reported that they had been trained, indicating the need to develop and revise training materials, intensify and provide continuous pre-service and in-service training and put in place a standard protocol to guide training of health providers on the use and proper storage of this lifesaving commodity. [9]

PUBLICATIONS

Section 02: Understanding why women are dying

PEER-REVIEWED JOURNAL ARTICLES

- 1. Baguiya, A. (2021). <u>Perinatal outcomes among births to</u> women with infection during pregnancy. *BMJ Open*, 106(10).
- Black, C. M., Vesco, K. K., Mehta, V., Ohman-Strickland, P., Demissie, K., & Schneider, D. (2021). <u>Hospital Readmission</u> <u>Following Delivery with and Without Severe Maternal</u> <u>Morbidity</u>. *Journal of Women's Health*, 30(12).
- Black, C. M., Vesco, K. K., Mehta, V., Ohman-Strickland, P., Demissie, K., & Schneider, D. (2021a). Incidence of Severe Maternal Morbidity During Delivery Hospitalization in U.S. Commercially Insured and Medicaid Populations. Journal of Women's Health, 31(1).
- Bracken, H., & Semanas, M. (2020). <u>Frequency and management of maternal infection in health facilities in 52 countries (GLOSS): a 1-week inception cohort study</u>. *The Lancet Global Health*, 8(5).
- Brookfield, K., Galadanci, H., Du, L., Wenning, L., Mohammed, I., Suleiman, M., Oladapo, O. T., Witjes, H., & Carvalho, B. (2021). Magnesium sulfate pharmacokinetics after intramuscular dosing in women with preeclampsia. AJOG Global Reports, 1(4), 100018.
- 6. Buser, J., Boyd, C., Moyer, C., Zulu, D., Ngoma-Hazemba, A., Mtenje, J., Jones, A., & Lori, J. (2020). <u>A case series of maternal-newborn delivery outcomes in rural Zambia</u>. *International Journal of Nursing and Midwifery*, 12(2).
- Cavallaro, F., Benova, L., Dioukhane, E., Wong, K., Sheppard, P., Faye, A., Radovich, E., Dumont, A., Mbengue, A., Ronsmans, C., & Martinez-Alvarez, M. (2020). <u>What the</u> percentage of births in facilities does not measure: readiness for emergency obstetric care and referral in Senegal. *BMJ Global Health*, 5(3).
- 8. Chikkamath, S. B., Katageri, G. M., Mallapur, A. A., Vernekar, S. S., Somannavar, M. S., Piaggio, G., ... & Goudar, S. S. (2021). <u>Duration of third stage labour and postpartum blood loss: a secondary analysis of the WHO CHAMPION trial data.</u> Reproductive Health, 18(1), 1-7.
- Ejekam, C. S., Nyangara, F. M., Anyakora, C., & Nwokike, J. (2021). A descriptive study of healthcare-providers' experiences with the use and quality of oxytocin for the prevention of post-partum hemorrhage in Nigeria: A nationwide survey. PloS one, 16(10), e0258096.

- Green, E., Pradheep, S., Heinzelman, J., Nyanchoka, A., Achieng, D., Goyal, S., & Bellows, B. (2020). <u>Nivi Research:</u> <u>New pre-print about predicting healthcare seeking behavior</u>. *Nivi Research*.
- Kinney, M., Day, L., Palestra, F., Biswas, A., Jackson, D., Roos, N., de Jonge, A., Doherty, P., Manu, A., Moran, A., & George, A. (2021). <u>Overcoming blame culture: key strategies</u> to catalyse maternal and perinatal death surveillance and <u>response</u>. *BJOG: An International Journal of Obstetrics & Gynaecology*, 129(6), 839-844.
- Trost, S. L., Beauregard, J. L., Smoots, A. N., Ko, J. Y., Haight, S. C., Moore Simas, T. A., Byatt, N., Madni, S. A., & Goodman, D. (2021). Preventing Pregnancy-Related Mental Health Deaths: Insights From 14 US Maternal Mortality Review Committees, 2008–17. Health Affairs, 40(10), 1551-1559.
- Tukur, J., Lavin, T., Adanikin, A., Abdussalam, M., Bankole, K., & Ekott, M.I. (2022). Quality and outcomes of maternal and perinatal care for 76,563 pregnancies reporting in a nationwide network of Nigerian referral-level hospitals. The Lancet, Discovery Science, 47(101411).
- 14. Vernekar, S. S., Goudar, S. S., Metgud, M., Pujar, Y. V., Somannavar, M. S., Piaggio, G., Goudar, S. S. (2021). Effect of heat stable carbetocin vs oxytocin for preventing postpartum haemorrhage on post delivery hemoglobin-a randomized controlled trial. The Journal of Maternal-Fetal & Neonatal Medicine, 1-8.

WHITE PAPERS, REPORTS, CONFERENCE ABSTRACTS, TECHNICAL RESOURCES

- Chazotte, C., & Koch, A. (2020). A <u>Guide to Integrating</u>
 <u>Severe Maternal Morbidity Case Review into Hospital Quality Improvement Committees</u>. New York City Department of Health and Mental Hygiene.
- 2. Clyde, M., Cremer, S., Emple, H., Folake Eniola, B., Koch, A., Rivera, D., Searing, H., & Ma. (2020). Introducing: The Severe Maternal Morbidity Toolkit. New York City Department of Health and Mental Hygiene.
- 3. Emple, H., & Cremer, S. (2020). <u>Innovative Strategies for Community Engagement: Raising Awareness to Reduce Severe Maternal Morbidity</u>. New York City Department of Health and Mental Hygiene.

- Enola, F., Nack, A., Niles, P., Morton, C., Searing, H., & Ma. (2020). Women's Experiences with Severe Maternal Morbidity in New York City: A Qualitative Report. New York City Department of Health and Mental Hygiene.
- Friberg, I., Weissman, E. (2020). <u>Cost-effectiveness of</u> maternal and newborn health interventions and packages in 59 low- and middle-income countries. MSD for Mothers & Copenhagen Consensus Center.
- 6. Green, E. (2020). <u>Nivi Research: Tracking vaccine hesitancy</u>. *Nivi Research*.
- Gülmezoglu, M., Mukhwana, R., Katende, M., Ng'Ang'A, J., Rushwan, S., & Mburu, R. (2021). <u>Concept Foundation:</u> <u>Improving Access to Essential Medicines to Prevent and Manage Postpartum Hemorrhage in Africa</u>. 32nd ICM Virtual <u>Triennial Congress</u>. 218.
- 8. Jane Wausi. (2021). <u>Post-partum hemorrhage prevention</u> and management; what are the drug options? Midwives Association of Kenya. 6th Annual Midwifery Association of Kenya scientific conference.
- 9. Maternity Foundation. (2021). <u>Shaping the future of</u> midwifery learning through data.
- 10. Nigeria Health Watch. (2020). Why Are Women Dying While Giving Birth In Nigeria?
- 11. Smiles for Mothers. (2021). <u>Smiles for mothers one year brief:</u> An opportunity to reduce mortality in Nigeria.
- 12. Weissmann, E., & Friberg, I. K. (2020). <u>Cost-effectiveness of Maternal and Newborn Health Interventions</u>. Copenhagen Consensus Center.
- 13. World Health Organization. (2021). limplementation of maternal and perinatal death surveillance and response as part of quality of care efforts for maternal and newborn health: Considerations for synergy and alignment.
- 14. World Health Organization. (2022). Global report on the epidemiology and burden of sepsis.

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PUBLICATIONS (cont'd)

Section 02: Understanding why women are dying

SELECTED ARTICLES, OPINIONS AND WEBINARS

- Devex. (2021). <u>Conversations on Reproductive and Child</u> <u>Health</u>. Maternity Matters.
- de Francisco, A., Batres Cerezo, G., Izquierdo, M., Sobers, N., & Duran, P. (2021). <u>Series 10- Webinar 2: A special focus on perinatal death reviews in MPDSR</u>. WHO Quality of Care Network.
- 3. Institute for Healthcare Improvement. (2020). One Cause of Maternal Mortality Is More Common Than You May Think. Institute for Healthcare Improvement.
- Moses, F., Mannah, M. M., Squire, J., & Palestra, F. (2022). <u>Series 10- Webinar 5: Addressing inequalities through the MPDSR system: Lessons learned from Sierra Leone</u>. WHO Quality of Care Network.
- Muanya, C. (2021). <u>Reducing maternal deaths due to post partum hemorrhage</u>. The Guardian Nigeria News Nigeria and World News.
- 6. National Institute of Biomedical Imaging and Bioengineering. (2022). <u>Virtual Workshop: Technology to Improve Maternal Health</u>
- 7. Nigeria Health Watch. (2021). <u>Poor Quality Maternal</u> Medicines: The slippery slope to maternal deaths in Nigeria.
- 8. Obokoh, A. (2021). MPD-4-QED: A Database to Improve the Quality of Care for Maternal and Newborn Health in Nigeria. Nigeria Health Watch.
- 9. Obot, B. (2020). Why Are Women Dying While Giving Birth in Nigeria?; Recommendations for Improved Outcomes. Nigeria Health Watch.
- Oyeniyi, S., Kidula, N., Abdullah, M., Gohar, F., & Maliqi, B. (2021). Series 10- Webinar 3: The role of MPDSR in delivering quality care for maternal and newborn health. WHO Quality of Care Network.
- WHO Quality of Care Network. (2020). Maternal and Perinatal Database for Quality, Equity, Dignity Programme. <u>Newsletter</u>, Issue 4.
- WHO Quality of Care Network. (2021). Maternal and Perinatal Database for Quality, Equity, Dignity Programme. <u>Newsletter</u>, <u>Issue 5</u>.

- WHO Quality of Care Network. (2021). Maternal and Perinatal Database for Quality, Equity, Dignity Programme. <u>Newsletter</u>, <u>Issue 6</u>.
- WHO Regional Office for Africa (2021). WHO collaborates with Ministry of Health to tackle maternal and perinatal mortality. WHO Africa.
- Smiles for Mothers. (2021). <u>Smiles for Mothers: Making</u> Deliveries Safer. *Medium*.
- Sridhar, P. (2020). <u>Making pregnancy and childbirth safer: A guality mission for maternal healthcare</u>. *Financial Express*.
- Tsanni, A. (2020). #GivingBirthInNigeria: Curbing Nigeria's High Rate of Maternal Deaths Through Community MPDSR. Nigeria Health Watch.

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All women should receive safe, high-quality, respectful maternity care regardless of where they seek care. Around the world, the private sector delivers a significant proportion of health care services, with more than 40% of women from low and middle-income countries, including women from the lowest income quintiles, receiving their antenatal, labor and delivery care and family planning services from private health providers.^{38 39} However, these private health providers - including, midwives, physicians, nurses, faith-based healers, pharmacy owners, entrepreneurs and other local nongovernmental health providers – are often overlooked in quality improvement efforts, largely because they are not linked to public health systems or to government or donor-led efforts to improve quality.

The private health sector is an untapped resource to expand access to vital maternal health services and advance health equity.

The publications in this section examine efforts to improve the quality of care among a range of private health providers working in diverse contexts. Themes from the research highlight the importance of meeting the needs of private health providers in building their capacity to deliver consistent, highquality care for all women.



Research Question:

What is the impact of Manyata - a quality improvement and certification program for maternity care?

Child Health Task Force & John Snow Inc., Research & training Institute. (2022) Improving the quality of newborn and child health services in private facilities: Lessons from Manyta project in India.

Context

In India, the private sector accounts for up to 80% of all outpatient care and up to 60% of inpatient care.⁴⁰ Several studies conducted across India report the quality of maternity care in private facilities as suboptimal. The main contributors to poor quality were lack of qualified staff, technical resources, regulatory guidelines and guality improvement initiatives. 41 Respectful maternity care practices in the private sector, while frequently reported to be better than in public facilities, also have room for improvement. 42 Although the Government of India had launched various initiatives for improving the quality of maternity care in public facilities, there were no comparable quality improvement initiatives for private health facilities.

Manyata is a quality improvement and certification program offered by the Federation of Obstetric and Gynaecological Societies of India (FOGSI) to private facilities. The certification acts as a stamp of quality, ensuring consistent, safe and respectful maternity care for women during the antenatal, intrapartum and postpartum periods. Manyata, funded by MSD for Mothers, is based on the WHO's Safe Childbirth Checklist and adapted under the guidance of FOGSI, with technical assistance from Jhpiego - an international non-profit organization affiliated with Johns Hopkins University. Manyata is centered on 16 quality standards that collaborators found to be the most important and that were considered achievable at small private health



facilities. These standards are related to antenatal care, prevention of postpartum hemorrhage, adherence to infection and complications protocols, Caesarean deliveries and respectful maternity care.

Research Contributions

Ariadne Labs – a joint research and innovation center between Brigham and Women's Hospital and the Harvard T.H. Chan School of Public Health conducted a qualitative study with over 180 key

stakeholders, including doctors, nurses, program implementers, FOGSI quality assessors, and rogram leaders to understand the impact of Manyata and guide the future development of the program with a focus on three main topics 1.) the perceived value and factors for private facilities to engage with Manyata, 2.) how and why facilities improve quality, achieve accreditation, improve health outcomes and affect the patient experience through Manyata and 3.) how facilities can sustain quality improvement efforts long term.



Key Findings

1. Motivation to join Manyata

- · The highest value and motivation for joining Manyata, according to qualitative data, was increased access to staff training. Facility owners found it difficult to access training to keep staff up to date especially in the context of high turnover, which is constant at many facilities in the private sector.
- Strategies to improve quality care, including standardization of care across patients, implementation of protocols and improved efficiencies across providers, were cited as a main reason to join the program.
- Affiliation with FOGSI was critical to influence facilities' decision to join program. Large periods of enrollment occurred around FOGSI-led events.
- Receiving the accreditation certificate was cited as lower value and not a major motivation to join the program.
- · Findings were inconclusive in terms of the facilities' ability to increase fees - no increased revenue or patient load was noted but the study was conducted at times of high COVID rates, which may have impacted findings.

2. Barriers to join Manyata

- A major barrier to join was the high program
- The perceived lack of need for the program amongst some facilities was also a barrier.

3. Success

- Manyata standards were met by an average of 24% of facilities at baseline (range from 9% of facilities meeting the standard for newborn resuscitation to 46% of facilities meeting the standard for antenatal care). Improvements were seen across all standards and across all models of the program, including both in-person and virtual.
- Supply preparation standards were the easiest to achieve, while the complication management standards were the most difficult, especially the Caesarean standard which had the lowest adherence.
- Complication management standards (e.g. neonatal resuscitation, eclampsia management, cesarean deliveries) were the most challenging to achieve due to infrequency of occurrence, complexity of care and associated documentation burden.
- Within a facility, higher levels of leadership support and higher staff competency contributed to increased ability to achieve accreditation.
- Limited data was available to assess related morbidity and mortality due to the selfreported, programmatic nature of the data.

4. Sustainability of program

Qualitative results revealed that sustaining improved change for behaviors that are less frequent, such as newborn resuscitation, are of concern to providers at Manyata facilities especially in the context of high staff turnover.

"The things that we regularly do won't be any problem. The things that we do only sometimes, like baby resuscitation, we lose practice. We have to keep doing rehearsals to remember these skills."

—Manyata nurse, Jharkand

Researchers' Insights

- To encourage facilities to continue to enroll in Manyata, it is critical to emphasize the program value, leverage professional societies such as FOGSI, show the need for quality improvement and communicate a clear pathway for facilities to enroll and succeed.
- 2. In order to improve the achievements of standards and associated verification criteria it is recommended to expand strategies to improvement complication management, including for caesarean deliveries, and implement a segmented approach to quality improvement, tailoring levels and types of support that facilities need.

 Refresher trainings on Manyata standards and verification criteria, mentorship to maintain QI culture, a schedule for recertification, and a reduced paperwork burden are recommended to improve sustainability.



From Evidence to Impact

Expanding the availability and affordability of care without improving quality will not improve population health and remains a key barrier to enhancing health equity across national health systems. Since 2013, Manyata has certified over 1,700 private facilities, growing to over 22 states across India, and is poised to expand further. The National Accreditation Board for Hospitals and

Healthcare Providers (NABH) and FOGSI recently established a joint working committee to integrate NABH and Manyata standards into a nationally available quality service for both public and private health providers – encouraging more providers to meet quality standards for maternity care.⁴³

Ensuring high quality childbirth care is critical to saving lives. The research from Manyata shows that there is a clear need to include the private sector in quality-related initiatives and offers a pathway to private sector engagement.

Research Question:

What is the effect of family planning trainings on community pharmacists and patent propriety medicine vendors' knowledge retention?

Baruwa, S., Tobey, E., Okafor, E., Afolabi, K., Akomolafe, T., Ubuane, I., Anyanti, J., & Jain, A. (2022). Supporting Task Shifting and Task Sharing in Nigeria: An Assessment of Family Planning Knowledge Retention of Community Pharmacists and Patent Proprietary Medicine Vendor. Europe PMC.

Context

Nigeria has the fourth highest maternal mortality ratio in the world.⁴⁴ The country also has a low contraceptive prevalence rate of 17%, which contributes significantly to these poor rankings given that reliable access to a broad range of modern family planning methods can avert up to two-thirds of all unintended pregnancies and maternal deaths. 4546

An estimated 50% of Nigerians receive their health care from private health providers, including local pharmacies. 47 The IntegratE Project, supported by the Bill & Melinda Gates Foundation and MSD for Mothers, aims to expand people's access to a range of local family planning services and improve the quality of these services delivered by community pharmacists (CPs) and patent and proprietary medicine vendors (PPMVs). The project focuses on implementing a tiered accreditation system and providing technical support for delivering quality family planning services in underserved areas of Lagos and Kaduna states.

Research Contributions

Studies show that family planning trainings can improve private health providers' knowledge and



quality of services. A study in India, showed that a after training in family planning methods, private medical practitioners' family planning knowledge improved, resulting in better care for their clients. 48 Another study in Nepal found positive improvements in client satisfaction at intervention clinics as compared to the control.⁴⁹ In Nigeria, previous studies revealed that PPMVs' knowledge of injectable contraceptives increased with training^{50 51} and PPMVs' family planning clients

were also generally satisfied with the services received.⁵² To build on this evidence base, the Population Council and the Society for Family Health conducted a study that explores the effect of family planning trainings on CPs and PPMVs' knowledge in Kaduna and Lagos States in Nigeria and reviews the role of job aids - medical guides, brochures and family planning flip charts - in supporting knowledge retention over time.



- Nine months after the family planning training, knowledge about key general family planning questions as well as specific family planning methods was retained.
- 2. CPs and PPMVs who reported receiving the Medical Eligibility Criteria Wheel for Contraceptive Use a guide for family planning providers in recommending safe and effective contraceptive methods for women with medical conditions or medically-relevant characteristics were more than twice as likely to retain knowledge about injectable contraceptives nine-months later.
- Overall, CPs and PPMVs retained knowledge about injectables more so than knowledge about implants due to prior experience in providing injectables.

4. CPs and PPMVs who reported receiving job aids - brochure on family planning methods, toolkit and counseling cards - were more likely to answer the key knowledge questions correctly.

Researchers' Insights

- CPs and PPMVs can be trained to offer family planning counseling and a broad range of family planning services to those who need them most.
- **2.** Jobs aids were proven necessary for training reinforcement and knowledge retention.
- 3. Targeted training coupled with job aids for family planning and counseling services is an effective approach to sustainably improve knowledge retention among CPs and PPMVs - specifically around key general family planning issues as well as injectables and implants.



From Evidence to Impact

"This research underscored the importance of leveraging local pharmacies and drug stores to expand access to quality family planning services, especially in underserved communities. As a result, this research informed the revision of the task shifting and task sharing policy, which now allows CPs and PPMVs with health qualifications to provide an expanded scope of family planning services."

—Emeka Emmanuel Okafor,Chief of Party of IntegratE

IntegratE has scaled its services beyond Lagos and Kaduna, with the intention to expand to 11 states in Nigeria by the end of 2026, as well as expanded its training portfolio to include select primary health care services. The Pharmacy Council of Nigeria – a federal government organization that regulates and controls Pharmacy education, training and practice – continues to endorse, advocate for and implement IntegratE's training and tiered accreditation system as part of the Nigerian health care system. ⁵³⁵⁴



Research Question:

How does Unjani Clinic's unique organization design allow for a scalable and financially sustainable approach to social impact?

Raghavan, R. (2021). Unjani Clinic Network: an innovative and scalable hybrid enterprise model that achieves social impact through entrepreneurship. Journal of Organization Design, 10(3-4),

Context

Health entrepreneurs in low- and middle-income countries have great potential to accelerate innovations in improving maternity care, but often confront challenges in maintaining a financially viable business while trying to provide health care more equitably. Unjani Clinic aims to re-engineer and strengthen the South African health system by creating accessible, affordable, communitybased primary care clinics for those who are able to pay a nominal amount towards their health care services. The network includes nearly 135 clinics, each owned and operated by a local nurse. This social business model is designed to increase the number of practitioners in rural and underserved communities, create permanent jobs and establish a sustainable model for providing primary health care and maternal health services in diverse locations while expanding universal health coverage in South Africa.

Through the MOMs (Maternal Outcomes Matter) <u>Initiative</u> - a collaboration among the United States International Development Finance Corporation, MSD for Mothers, Credit Suisse and United States Agency for International Development (USAID) to stimulate, advance and scale innovations that contribute to a healthy pregnancy and safe childbirth - MSD for Mothers is supporting Unjani Clinic to reach more underserved women in sub-Saharan Africa.



Research Contributions

Unjani Clinic is a network of nurse-led clinics that aims to develop a sustainable clinic model for providing primary health care in South Africa. The organization is structured as a social franchise, where Unjani nurses are both providers of affordable health care services for those unable to access private health insurance, as well as entrepreneurs, who lead their respective primary health care clinics. The network of clinics is led by a non-profit company that acts as a franchisor, overseeing the entire network, ensuring clinics

operate according to the norms and standards set by the rules and regulations of the country, as well as determining the list and pricing of services delivered in each clinic. This paper, by a group of independent researchers, summarizes the factors that enable the Unjani Clinic Network to sustainably scale while maintaining a social mission. It examines the network's strategic approach and relevant lessons for other social-driven organizations to consider when seeking to scale their operations.



Key Findings

- 1. A hybrid model of a non-profit company (Unjani head office) and for-profit entities (independent primary health care clinics operating as part of a social franchise) enables the organization to sustainably pursue its social mission while securing long-term financial security.
- 2. Combining entrepreneurial autonomy at the clinic level, with controls at the non-profit company to safeguard the social mission, supports Unjani to address the tension between social and financial value creation which often prevents social enterprises from scaling successfully.
- **3.** Fostering an autonomous and transparent organizational culture driven by the organization's social mission, enabled Unjani Clinic to sustainably increase the number of clinics in the network: only seven of the 90 nurses have exited the network after their 5-year agreement, in spite of their potential opportunity to pursue more lucrative services as independent health providers.
- **4.** Having a strong, shared organizational identity within a hybrid organization is critical to avoid mission drift.

Researchers' Insights

- 1. The unique structure of the organization allows Unjani Clinic to effectively incubate its own social entrepreneurs and grow, while adhering to the social mission of the organization.
- 2. The close informal ties between the CEO and the Network General Manager, as well as the

strong set of lateral ties among nurses, offer "nursepreneurs" a role model and supportive peers which enable them to stay motivated toward the organization's social mission.



Why it matters

In many countries with poor health infrastructure and outcomes, small and medium enterprises are an untapped resource for innovation. Health entrepreneurs have the potential to accelerate gains in health care, address key barriers that exacerbate health inequities, and foster local economic growth.⁵⁵

The proverb says, 'it takes a village to raise a child,' but it takes an Unjani Clinic nurse to help the mother through her pregnancy to postnatal journey to ensure there is a healthy child to raise."

—Lynda Toussaint, CEO of Unjani Clinic



Tools for Engaging the Private Sector to Strengthen Mixed Health Systems

Results for Development, a non-profit strategy consulting organization, developed a set of tools to support Kenya and India's efforts to build effective public-private engagements (PPE) to strengthen mixed health systems and achieve universal health coverage goals. The Journey Guide for Effective Public-Private Engagement in Health includes:⁵⁶

- 1. The <u>PPE Engagement Factors Self-Assessment Tool</u> for organizations to self-assess the strength of their engagement across a range of factors.
- 2. The Rapid Health Systems Integration
 Assessment Tool to assess the environmental,
 structural and other factors surrounding publicprivate engagement.
- The <u>Co-Creation Workshop</u> materials can be adapted to different engagements and contexts to provide support in co-creating solutions to priority challenges.



—Sarbani Chakraborty, Senior Program Director and Lead, Mixed Health Systems Practice, Results for Development



Tools for Strengthening Governance of the Private Health Sector

The **Country Connector** is an initiative of the WHO to strengthen governance of the private sector in health as a key strategy to improve health outcomes. 57 With support from MSD for Mothers, the WHO has collated tools from global health funders and other institutions to create a comprehensive repository - linking countries to practical resources, expert counsel and training guidance to support private sector engagement in mixed health systems.

The WHO developed the Country Connector following its 2020 report that examined the private sector's role in strengthening health systems and bridging access to health care services and its governance strategy, which adopts a behavioral approach to leveraging and integrating the private health sector into mixed health systems.⁵⁸

Example: Joint Learning Network's practical manual to help facilitate public-private sector engagement around primary health care.⁵⁹

"Our research has underscored the role of the private sector in addressing challenges facing women's access to essential health services, including maternal services. During the pandemic, when public facilities were overrun with COVID-19 patients. women didn't have many choices when it came to accessing public services. So, it became really clear how important the Country Connector was in guiding interventions that aim to benefit women's health and respond to their demands for better health services during the pandemic and beyond."

—David Clarke, Acting Unit Head, Health System's Governance and Policy, World Health Organization

Why work with the private sector?

Answers to these and other questions will lead to different types of engagement with different segments of the private sector.

- Is it to increase access to essential services in a particular region or for population groups that currently make heavy use of private rather than government providers?
- Are significant segments of the population using private providers for primary curative care, but missing out on preventive care?
- Are there concerns about the quality of private services that call for more effective regulation?
- Will a future health financing reform or donor transition benefit from public financing flowing to private providers for the first time?

Joint Learning Network for Universal Health Coverage (2019) | Step 2, understand and detail rationale for engaging the private sector in PHC

PUBLICATIONS

Section 03: Improving the quality of maternity care

PEER-REVIEWED JOURNAL ARTICLES

- 1. Baruwa, S., Tobey, E., Okafor, E., Afolabi, K., Akomolafe, T., Ubuane, I., Anyanti, J., & Jain, A. (2022). Supporting Task Shifting and Task Sharing in Nigeria: An Assessment of Family Planning Knowledge Retention of Community Pharmacists and Patent Proprietary Medicine Vendor. Europe PMC.
- 2. Brizuela, V., Bonet, M., Trigo Romero, C. L., Abalos, E., Baguiya, A., Fawole, B., Knight, M., Lumbiganon, P., Minkauskienė, M., Nabhan, A., Bique Osman, N., Qureshi, Z. P., & Souza, J. P. (2020). Early evaluation of the 'STOP SEPSIS!' WHO Global Maternal Sepsis Awareness Campaign implemented for healthcare providers in 46 low, middle and high-income countries. BMJ Open, 10(5).
- 3. Charurat, E., Kennedy, S., Qomariyah, S., Schuster, A., Christofield, M., Breithaupt, L., Kariuki, E., Muthamia, M., Kabue, M., Omanga, E., & Stekelenburg, J. (2020). Study protocol for Post Pregnancy Family Planning Choices, an operations research study examining the effectiveness of interventions in the public and private sectors in Indonesia and Kenya. Gates Open Research, 4, 89.
- 4. Choudhry, V., Weiner, B., Karkhanis, P., Avinandan, V., Shah, N., Bahl, N., Wadhwa, R., Sridhar, P., & Chandurkar, D. (2020). Determinants of technology use for a mobile health intervention across public health facilities in rural India: Protocol for implementation research. Gates Open Research,
- 5. Cunningham, S. D., Riis, V., Line, L., Patti, M., Bucher, M., Durnwald, C., & Srinivas, S. K. (2020). Safe Start Community Health Worker Program: A Multisector Partnership to Improve Perinatal Outcomes Among Low-Income Pregnant Women with Chronic Health Conditions, American Journal of Public Health, 110(6), 836-839.
- 6. Diop, A., Abbas, D., Ngoc, N., Martin, R., Razafi, A., Tuyet, H., & Winikoff, B. (2020). A double-blind, randomized controlled trial to explore oral tranexamic acid as adjunct for the treatment for postpartum hemorrhage. Reproductive Health, 17(24).
- 7. Ejekam, C. S., Nyangara, F. M., Anyakora, C., & Nwokike, J. (2021). A descriptive study of healthcare-providers' experiences with the use and quality of oxytocin for the prevention of post-partum hemorrhage in Nigeria: A nationwide survey. PLOS ONE, 16(10), e0258096.
- 8. Henry, E., Ngoma, T., & Kaiser, J. (2020). Evaluating implementation effectiveness and sustainability of a

- maternity waiting homes intervention to improve access to safe delivery in rural Zambia: a mixed-methods protocol. BMC Health Serv Res, 20(191).
- 9. Krug, C., Cavallaro, F. L., Wong, K. L. M., Gasparrini, A., Faye, A., & Lynch, C. A. (2020). Evaluation of Senegal supply chain intervention on contraceptive stockouts using routine stock data. PLOS ONE, 15(8), e0236659.
- 10. Lange, I. L., Nalwadda, C. K., Kiguli, J., & Penn-Kekana, L. (2021). The Ambiguity Imperative: "Success" in a Maternal Health Program in Uganda. Medical Anthropology, 40(5),
- 11. Latoff, S., & Maliqi, B. (2020). Private sector delivery of quality care for maternal, newborn and child health in lowincome and middle-income countries: a mixed-methods systematic review protocol. BMJ Open, 10(2).
- 12. Lattof, S. R., Maliqi, B., Yaqub, N., & Jung, A.-S. (2021). Private sector delivery of maternal and newborn health care in low-income and middle-income countries: a scoping review protocol. BMJ Open, 11(12), e055600.
- 13. Lee, H., Veliz, P. T., Ray, E. T., Chiboola, N. M., Phiri, T. K., Musonda, G., & Lori, J. R. (2020). Financial Preparedness for Birth Among Rural Zambian Women: Do Antenatal Care Contacts Make a Difference? Maternal and Child Health Journal, 25(1), 22-26.
- 14. Mehra, R., Boyd, L. M., Lewis, J. B., & Cunningham, S. D. (2020). Considerations for Building Sustainable Community Health Worker Programs to Improve Maternal Health. Journal of Primary Care & Community Health, 11, 215013272095367.
- 15. Nishimwe, A., Ibisomi, L., Nyssen, M., & Conco, D. N. (2020). The effect of a decision-support mHealth application on maternal and neonatal outcomes in two district hospitals in Rwanda: pre - post intervention study. BMC Pregnancy and Childbirth, 22(1).
- 16. Pugliese-Garcia, M., Radovich, E., Campbell, O. M. R., Hassanein, N., Khalil, K., & Benova, L. (2020). Childbirth care in Egypt: a repeat cross-sectional analysis using Demographic and Health Surveys between 1995 and 2014 examining use of care, provider mix and immediate postpartum care content. BMC Pregnancy and Childbirth, 20(1).
- 17. Raghavan, R. (2021). Unjani Clinic Network: an innovative and scalable hybrid enterprise model that achieves social impact through entrepreneurship. Journal of Organization Design, 10(3-4), 109-113.

- 18. Rosenberg, J., Ahmad, I., Sharara, N., & Weintraub, R. (2021). Improving Maternal Health by Addressing Stockouts: Integrating the Private Sector into the Public Health Supply Chain in Senegal. The Global Health Delivery Project at Harvard University.
- 19. Theunissen, F., Cleps, I., Goudar, S., Qureshi, Z., Owa, O. O., Mugerwa, K., Piaggio, G., Gülmezoglu, A. M., Nakalembe, M., Byamugisha, J., Osoti, A., Mandeep, S., Poriot, T., Gwako, G., Vernekar, S., & Widmer, M. (2021). Correction to: Cost of hospital care of women with postpartum haemorrhage in India, Kenya, Nigeria and Uganda: a financial case for improved prevention. Reproductive Health, 18(1).
- 20. Usmani, S., Chhugani, M., & Khan, M. (2020). A Study to Assess the Effectiveness of Safe Delivery Application for Pre-Service Nursing Students in a Selected College of Nursing of New Delhi, International Journal of Nursing & Midwifery Research, 6(4)
- 21. Usmanova, G., Lalchandani, K., Srivastava, A., Joshi, C. S., Bhatt, D. C., Bairagi, A. K., Jain, Y., Afzal, M., Dhoundiyal, R., Benawri, J., Chaudhary, T., Mishra, A., Wadhwa, R., Sridhar, P., Bahl, N., Gaikwad, P., & Sood, B. (2021). The role of digital clinical decision support tool in improving quality of intrapartum and postpartum care: experiences from two states of India. BMC Pregnancy and Childbirth, 21(1).
- 22. Walker, D. M., DePuccio, M. J., & McAlearney, A. S. (2020). Barriers and facilitators to hospital implementation of obstetric emergency safety bundles: a qualitative study. Journal of Hospital Management and Health Policy, 5, 3.

WHITE PAPERS, REPORTS, CONFERENCE ABSTRACTS. TECHNICAL RESOURCES

- 1. Asiedu, E. K., Doe, R., Lattoff, S., Maligi, B., Otchi, E.H., Yagub, N. (2021). Study on engaging the private sector in delivering quality maternal and newborn health services in Ghana. Quality of Care Network.
- 2. Ariande Labs. (2021). Fostering livable communities for birthing people: A platform for dta-driven investment in the wellbeing of mothers.
- 3. AWHONN. (2022). Respectful maternity care implementation toolkit (RMC-IT).
- 4. AWHONN, (2022), Respectful Maternity Care Framework and Evidence-Based Guideline.

PUBLICATIONS (cont'd)

Section 03: Improving the quality of maternity care

- 5. AWHONN. (2022), SBAR for Women, Pregnant, and Postpartum People with Limited English Proficiency (LEP).
- 6. Johns Hopkins Center for Communication Program. (2020). <u>Modified Clinic Makeover - The Private Sector Experience</u>. Compass.
- 7. Johns Hopkins Center for Communication Programs. (2022). In Clinic Demand Generation for Post Pregnancy Family Planning Services in the Private Sector. Compass.
- 8. Johns Hopkins. (2022). Strengthening Family Planning Services in the Private Sector. Johns Hopkins Center for Communication Programs.
- 9. Mathematica. (2020). Maternal Health Care Quality and Outcomes Under the Utkrisht Impact Bond: Midline Findings and Insights.
- 10. Laderman, M., & Renton, M. (2020). Providing Safe, High-Quality Maternity Care in Rural US Hospitals. Institute for Healthcare Improvement. Insititute for Healthcare Improvement
- 11. Otchi, E., Fikre, M., Lattof, S., O'Hanlon, B., Yagub, N., Asiedu, E. K., Maligi, B., Doe, R., Dsane-Aidoo, P. (2021). Private sector delivery of quality maternal and newborn health services in Ghana. World Health Organization Quality, Equity and Dignity Network.
- 12. Otchi, H. (2021). Literature Review: Study on engaging the private sector in delivering quality maternal and newborn health services in Ghana. World Health Organization Quality. Equity and Dignity Network.
- 13. PATH. (2020). Co-creating solutions for postpartum hemorrhage.
- 14. Ministry of Health, Ghana & WHO. (2021). Multi-stakeholder workshop report - study on engaging the private sector in delivering quality maternal and newborn health services. World Health Organization Quality, Equity and Dignity Network.
- 15. Quality of Care Network. (2021). Mechanisms for engaging the private sector in planning, delivering and demonstrating accountability for quality maternal and newborn health services: Evidence from Bangladesh.
- 16. Thomas, C., Lanzara, C., Tolmie, C., Mangam, K., & Adams, E. (2021). Strengthening Mixed Health Systems Evidence Review. Results for Development.

- 17. Thomas, C., Mangam, K., & Gutierrez, D. (2021). Rapid Health Systems Integration Assessment Tool. Results for Development.
- 18. Thomas, C., Mangam, K., Tolmie, C., Lanzara, C., Gutierrez, D., & Adams, E. (2021). Public-Private Sector Engagement Co-Creation Workshop: Facilitator's Guide. Results for Development.
- 19. Thomas, C., Mangam, K., Tolmie, C., Lanzara, C., Gutierrez, D., & Adams, E. (2021). Engagement Factors Self-Assessment Tool. Results for Development.
- 20. Tolmie, C., Lanzara, C., & Thomas, C. (2021). Strengthening Mixed Health Systems for Maternal Health Project Learning Report. Results for Development.
- 21. Tolmie, C., Lanzara, C., Gutierrez, D., & Adams, E. (2021). Secondary Case Review of Public-Private Engagements in Health Crosscutting Analysis. Results for Development.
- 22. Tolmie, C., Lanzara, C., Thomas, C., & Mangam, K. (2021). Supporting Public-Private Engagement in Kakamega County (Kenya) Case Study. Results for Development.
- 23. Tolmie, C., Lanzara, C., Thomas, C., Mangam, K., Gutierrez, D., & Adams, E. (2021). The Public-Private Engagement (PPE) **Ecosystem**. Results for Development.
- 24. United Nations Foundation (2020). Investing in Workplace Women's Health and Well-Being in the Indian Apparel Sector.
- 25. United Nations Foundation (2020). Investing in Workplace Women's Health and Well-being in the Kenyan Agriculture Sector.
- 26. Universal Access Project. (2020). Moving the Needle in Global Supply Chains: Private Sector Action for Women's Health and **Empowerment Progress Report.** United Nations Foundation
- 27. Welch, S. (2020). Maternity Matters: Funding the Future. Conversations in Reproductive and Child Health. Report Part 1.
- 28. Welch, S. (2020). Maternity Matters: Funding the Future. Conversations in Reproductive and Child Health. Report Part 2.
- 29. World Health Organization (WHO), Department of Maternal, Newborn, Child and Adolescent (2021). Ghana Research Protocol.

SELECTED ARTICLES, OPINIONS AND WEBINARS

- 1. Adams, A. (2021). <u>Important links between factors that affect</u> public-private engagement. Results for Development.
- 2. Adams, E., Anand, J., Gitonga, N., Gutierrez, D., Lanzara, C., Mangam, K., Marani, L., Obita, W., Thomas, C., & Tolmie, C. (2021). What's next for strengthening mixed health systems. Results for Development.
- 3. Adepoju, P. (2021). OMOMi is leveraging digital technology to provide women with easy access to quality maternal health care. Nigeria Health Watch.
- 4. Ariadne Labs. (2021). The Maternal Wellbeing City Dashboard: A Catalyst For Actionability Through Narrative and Data. Medium.
- 5. Asiedu, E., Sagoe-Moses, I., Ayertey, P., Doe, R., Maligi, B. (2021). Series 5- Webinar 5: Lessons from engaging the private sector in delivering quality maternal and newborn health services in Ghana. WHO Quality of Care Network.
- 6. Bhattacharya, S., Russell, R. (2020). The Women Behind the Clothes: Worker Health and Well-being in the Indian Apparel Sector.
- 7. Chaitkin, M., Thomas, C., & Gutierrez, D. (2020). 4 opportunities to enrich quidance for public-private engagement in health. Results for Development.
- 8. Child Health Task Force & John Snow Inc., Research & training Institute. (2022) Improving the quality of newborn and child health services in private facilities: Lessons from Manyta project in India.
- 9. Christofield, M. (2018). We Must Address Our Private Sector 'Blind Spot' to Expand Postpartum Family Planning | ICFP. International Conference on Family Planning.
- 10. Ciceley, C., Lanzara, C., Mangam, K., Thomas, C. (2020). A call for evidence on strengthening mixed health systems.
- 11. Cocozza, A., Okaire, B., Ojo, O., & Maligi, B. (2021). Series 5- Webinar 6: Lessons from engaging the private sector in delivering quality MNH services in Nigeria | Quality of Care Network. WHO Quality of Care Network.

PUBLICATIONS (cont'd)

Section 03: Improving the quality of maternity care

- 12. Dada, I., Idowu, A., Yagud N.O. (2020). Series 5- Webinar 4: PharmAccess and Lagos State Health Insurance Scheme: Partners in delivering quality maternal and newborn health services in public and private facilities. WHO Quality of Care Network.
- 13. Devex Editor. (2020). Delivering on the promise of UHC for mothers in the COVID-19 era and beyond. Devex.
- 14. Devex Editor. (2020). Maternity Matters: Lessons on supporting local private sector providers. Devex.
- 15. Devex Editor. (2020). The journey to measure how donors leverage the private sector to achieve RMNCAH goals. Devex.
- 16. Devex Editor. (2021). Implementing innovative solutions for maternal health at scale. Devex.
- 17. ET HealthWorld. (2020). Technology-enabled solutions can help reduce preventable maternal and neonatal deaths.
- 18. Ejekam, C. S., & Anyakora, C. (2021). Poor knowledge and practice around oxytocin could put women in Nigeria at risk during childbirth. The Conversation.
- 19. Erogbogbo, T. (2021). Opinion: Private sector, UHC, and maternal mortality amid COVID-19. Devex.
- 20. Etiebet, M. (2020, May 5). Keeping Pregnant Women Safe during the Pandemic. Scientific American Blog Network.
- 21. Etiebet, M. (2020). Maternal Mortality: Reducing Pandemic's Effect on Health Inequity. Milken Institute.
- 22. Global Financing Facility. (2020). Myanmar: Leveraging Private Sector Innovation to Boost Primary Healthcare amid COVID-19.
- 23. Hasan, A., Chowdhuty, Hasan, Z., Islam, R., Rashid, B. (2021). Series 5- Webinar 1: Engaging the private sector in improving quality of care for maternal, newborn and child heath in Bangladesh. WHO Quality of Care Network.
- 24. Health-e News. (2020). Black women-owned Unjani Clinics get R11.7m cash injection from US investor.
- 25. iAfrica. (2021). Bolstering SA's Healthcare System One Nurse at A Time.
- 26. Institute for Healthcare Improvement. (2020). 5 Ways to Help Reduce Unnecessary Cesarean Sections. Institute for Healthcare Improvement.

- 27. Jalan, S. (2021). What COVID-19 Means for Women in Global Supply Chains — and How Companies Can Take Action.
- 28. Jhpiego. (2021). Better Business Management Improves Family Planning Services.
- 29. Lanzara, C., & Marani, L. (2021). Public-private health engagements: Lessons from Kakamega County, Kenya. Results for Development.
- 30. Mather, C. (2020). Creating Whole System Redesign of Rural Maternal Health Systems. Institute for Healthcare Improvement.
- 31. Mehra, P. (2020). The sky's the limit, for ASMAN. The Hindu BusinessLine.
- 32. Nigeria Health Watch. (2022). Leveraging the Private Sector to Expand Access to Family Planning — Without Compromising Quality.
- 33. Obot, B. (2021). Heart and Grit: Girl Child Concerns is empowering adolescent girls to offer maternal health services in Borno State. Nigeria Health Watch.
- 34. Obot, B. (2021). How a Collaborative Approach to Maternal Care is Saving the Lives of Mothers in Kaduna State. Nigeria Health Watch.
- 35. Obot, B. (2022). IntegratE Private Sector Providers to Improve Access to Family Planning Commodities and Services. Nigeria Health Watch.
- 36. Patil, A., Sood, B., Palshetkar, N., & Sridhar, P. (2022). Series 5- Webinar 3: Manyata: Sustaining Quality Assurance Accreditation for Maternal Health Care in India's Private Sector | Quality of Care Network. WHO Quality of Care Network.
- 37. Raijns, A., Saharan, S. (2020). Series 5- Webinar 2: Engaging the private sector for quality of care: Lessons from Together for Her Health: creating a market for quality of care in India. Quality of Care Network.
- 38. Reproductive Health Supplies Coalition. (2022). Human Centered Design: PPH Reduction Initiative in Nigeria.
- 39. Results for Development. (2021). Strengthening Mixed Health Systems: Building the case and pathways for quality private

- 40. Sridhar, P. (2021). Digital technology: The next frontier in healthcare delivery in post-Covid India. Times of India Blog.
- 41. Sridhar, P., Bahl, N., & Budharaju, S. (2020). Strengthen primary healthcare. Deccan Herald.
- 42. Toves, K. (2021). The Public-Private Sector Ecosystem: Factors for effective engagement. Results for Development.
- 43. Uche, H. (2021, November 4). Integrate: FG, stakeholders move to upscale PHC, family planning. The Sun Nigeria.
- 44. Uganda Healthcare Federation. (2022). Self-regulatory Quality Improvement System Plus.
- 45. WHO Regional Office for Africa. (2021). Nigeria pushes for companionship in labour to improve maternal health services.
- 46. Welch, S. (2020). Testing Virtual Ways to Support New Mothers. Institute for Healthcare Improvement.



Conclusion

Evidence helps build a strong foundation for sustained change – and change is sorely needed as the world regains lost ground from the COVID-19 pandemic and confronts widening health disparities. We are optimistic that the breadth of research insights generated by MSD for Mothers' collaborators will move us closer to understanding and acting on ways to improve maternal health outcomes and strengthen health systems.

We are inspired by the tools our collaborators have developed to ensure that women's experiences are informing their work to make maternity care more equitable and how these tools are being adopted more broadly – from a mobile technology platform that makes it easy for pregnant women in Kenya to report on their care to a scorecard that helps U.S. organizations assess how well they are integrating women with lived experience into their efforts to improve maternal health.

We are encouraged by the progress in understanding why women are dying – in both health facilities and in communities – and how governments are acting on what they learn. A strong example is Nigeria's partnership with the WHO to strengthen maternal death surveillance and the Federal Ministry of Health's plans to institutionalize it as part of the country's existing system for reporting on quality of care. And we are motivated by the growing recognition that achieving the global goals of universal health

coverage and reducing preventable maternal deaths requires focused attention on the quality of care that both public and private health providers deliver. For nearly a decade, we have been investing in quality improvement programs because we believe that all women should receive high-quality, respectful maternity care regardless of where they seek care. The WHO has affirmed this strategy and its Country Connector provides the practical resources, counsel and training countries need to engage the private sector in mixed health systems. India is a prime example of a country's heightened focus on private maternity care, with its National Accreditation Board for Hospitals and Healthcare Providers now collaborating with India's OB/GYN society to integrate maternity standards for private providers into a nationally available quality service for both public and private health providers.60

As this compendium highlights, our collaborators have generated evidence that is already leading to impact in improving maternal health – and we are grateful for the opportunity to support their outstanding work. We hope that the research findings and tools that our collaborators have produced will inspire continued innovation in global health, accelerate the deployment of evidenced-based solutions, contribute to saving many more women's lives and demonstrate that we can close health equity gaps by focusing efforts on communities that are most affected.



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Mathematica

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Nigeria Health Watch

Nivi

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PATH

Pathfinder International

PharmAccess Foundation

Population Council

Pre-eclampsia Foundation

PricewaterhouseCoopers

REACHUP

Sattva

Sibbel Health

Solina

Swasti

Trenton Health Team

Uganda Healthcare Federation

United Nations Foundation

University of Michigan

University of Pretoria

Unjani Clinic

United States Pharmacopeia

VecnaCares

White Ribbon Alliance

World Health Organization

Women Deliver

Yale University

Endnotes

- ¹ World Health Organization. (2021). New global targets to prevent maternal deaths
- ²WHO African Region. (2022). COVID-19 takes a heavy toll on women's health
- ³Lindberg, L.D., VandeVusse, A., Mueller, J., & Kirstein, M. (2021). The Continuing Impacts of the COVID-19 Pandemic in the United States: Findings from the 2021 Guttmacher Survey of Reproductive Health Experiences. Guttmacher Institute, report.
- ⁴Clinton Health Access Initiative. (2022) Climate change will lead to more pregnant women and newborns dying. The global health community can limit its impact.
- ⁵ Jawad, M., Hone, T., Vamos, E.P., Cetorelli, V., Millett, C. (2021). Implications of armed conflict for maternal and child health: A regression analysis of data from 181 countries for 2000-2019. PLoS Med. 2021 Sep 28:18(9):e1003810. doi: 10.1371/journal. pmed.1003810. PMID: 34582455; PMCID: PMC8478221.
- ⁶Thoma, M. E., Declercq, E. R. (2022). All-Cause Maternal Mortality in the US Before vs During the COVID-19 Pandemic. JAMA Network Open, 5(6), e2219133
- ⁷WHO African Region. (2022). COVID-19 takes a heavy toll on women's health
- ⁸BMGF. (2022). Maternal mortality: Global progress and projects for maternal mortality.
- 9WHO, UNICEF, UNFPA, World Bank Group, & United Nations Population Division. (2019). Trends in Maternal Mortality, 2000 to 2017. World Health Organization
- ¹⁰ Knight, M., Bunch, K., Patel, R., Shakespeare, J., Kotnis, R., Kenyon, S., & Kurinczuk, J.J. (2022). Lessons learned to inform maternity care from the UK and Ireland Confidential Enquiries into Maternal Deaths and Morbidity 2018-20. Oxford Population Health, Maternal, Newborn and Infant Clinical Outcome Review Programme.
- ¹¹Trost, S., Beauregard, J., Chandra, G., Njie, F., Berry, J., Harvey, A., & Goodman, D.A. (2022) Pregnancy-Related Deaths: Data from Maternal Mortality Review Committees in 36 US States. 2017–2019. Centers for Disease Control and Prevention.
- ¹²White Ribbon Alliance (WRA). (2022). What Women Won: Demands for Quality Healthcare.
- ¹³ Abate Adillo, M. (2021). Testing Changes for Respectful Maternity Care, Institute for Healthcare Improvement, Institute for Healthcare Improvement.
- ¹⁴CDC. (2022). Working Together to Reduce Black Maternal Mortality.

- ¹⁵ Amnesty International. (2010). USA: Deadly delivery: The maternal health care crisis in the USA
- ¹⁶ Health Newborn Network. (2018). Disrespect and Abuse in Childbirth and Respectful Maternity
- ¹⁷UNFPA. (2021). The State of Midwifery
- ¹⁸ Francis, J., Crosson, F. J., & Casalino, L. (2013) Physician Practice Satisfaction: Why We Should Care. Health Affairs.
- ¹⁹ West, C. P., Dyrbye, L. N., & Shanafelt, T. D. (2018). Physician burnout: contributors, consequences and solutions. Journal of Internal Medicine, 283(6), 516-529.
- ²⁰ UNFPA. (2021). The State of Midwifery
- ²¹Hear her campaign. (2022). <u>Pregnancy related complications can</u> affect anyone. Center for Disease Control and Prevention.
- ²² Hear her campaign. (2022). <u>Urgent Maternal Warning Signs</u>. Center for Disease Control and Prevention.
- ²³ AIM. (2020). <u>Urgent Maternal Warning Signs</u>. *American College* of Obstetricians and Gynocologists.
- ²⁴ Momma's Voices. Lived Experience Integration Scorecard. Preeclampsia Foundation
- ²⁵ Mgawadere, F., Kana, T., & van den Broek, N. (2017). Measuring maternal mortality: a systematic review of methods used to obtain estimates of the maternal mortality ratio (MMR) in lowand middle-income countries. British Medical Bulletin, 121(1), 121-134.
- ²⁶ Hernández-Vásguez, A., Chacón-Torrico, H., & Bendezu-Quispe, G. (2021). Prevalence of home birth among 880,345 women in 67 low-and middle-income countries: a meta-analysis of demographic and health surveys. SSM-population health, 16, 100955.
- ²⁷ World Health Organization. (2021). Maternal Death Surveillance and Response - overview.
- ²⁸World Health Organization. (2020). Maternal health in Nigeria: generating information for action.
- ²⁹ Nigeria Health Watch. (2020). Why are women dying while giving birth in Nigeria report.
- ³⁰ Obot, B.O. (2021). Human-centered Design for Life: How Smiles for Mothers is Keeping Mothers Alive. Nigeria Health Watch.
- ³¹Reproductive Health Supplies Coalition, (2022), Human centered design: PPH reduction initiative in Nigeria.

- ³² PATH. Co-creating an improved response to postpartum hemorrhage.
- ³³ Igbokwe, U. (2021). Smiles for mothers program is using human centered-design to co-create public health innovations.
- ³⁴MSD for Mothers. (2022). MSD for Mothers' approach to helping to reduce maternal mortality through investments to address the #1 driver of maternal deaths - postpartum hemorrhage.
- ³⁵ MSD for Mothers. (2022) Where we work.
- ³⁶ FIGO. (2022) <u>Improving access to essential medicines to reduce</u> postpartum haemorrhage (PPH) morbidity and mortality (IAP).
- ³⁷ Ameh, C. & Althabe, F. (2022). Special issue: Improving access to essential medicines to reduce postpartum hemorrhage morbidity and mortality. Internal Journal of Gynecology & Obstetrics, 158(S1).
- ³⁸ World Health Organization. (2020). Private sector landscape in mixed health systems
- ³⁹Campbell, O. M., Benova, L., MacLeod, D., Baggaley, R. F., Rodrigues, L. C., Hanson, K., ... & Goodman, C. (2016). Family planning, antenatal and delivery care: cross-sectional survey evidence on levels of coverage and inequalities by public and private sector in 57 low-and middle-income countries. Tropical medicine & international health, 21(4), 486-503.
- 40 Tripathi, S., Srivastava, A., Memon, P., Nair, T. S., Bhamare, P., Singh, D., & Srivastava, V. (2019). Quality of maternity care provided by private sector healthcare facilities in three states of India: a situational analysis. BMC Health Services Research, 19(1),
- ⁴¹Tripathi, S., Srivastava, A., Memon, P., Nair, T. S., Bhamare, P., Singh, D., & Srivastava, V. (2019). Quality of maternity care provided by private sector healthcare facilities in three states of India: a situational analysis. BMC Health Services Research, 19(1),
- ⁴² Tripathi, S., Srivastava, A., Memon, P., Nair, T. S., Bhamare, P., Singh, D., & Srivastava, V. (2019), Quality of maternity care provided by private sector healthcare facilities in three states of India: a situational analysis. BMC Health Services Research, 19(1), 1-9.
- ⁴³ Health Desk. (2022). FOGSI and NABH partner together to improve maternity care across India. Financial Express Health Care.
- ⁴⁴UNICEF Nigeria. (2017). Situation of women and children in Nigeria. Challenges faced by women and children in Nigeria.

Endnotes (cont'd)

- ⁴⁵ Statistica. (2021). <u>Prevalence rate of any contraceptive method</u> among women in Nigeria as of 2021, by civil status.
- ⁴⁶ Guttmacher Institute. (2020). <u>Provision of Essential Sexual and Reproductive Health Care Would Reduce Unintended</u>
 <u>Pregnancies, Unsafe Abortions and Maternal Deaths by About Two-Thirds</u>
- ⁴⁷ Abubakar, I., Dalglish, S.L., Angell, B., Sanuade, O., Abimbola, S., Adamu, A.L., et al. (2022). <u>The Lancet Nigeria commission: investing in health and the future of the nation</u>. *The Lancet*, 399(10330).
- ⁴⁸ Barge, S., Patel, B.C., Khan, I. (2002) <u>Use of private practitioners for promoting oral contraceptive pills in Gujarat</u>. *Center for Operations Research & Training*, 5.
- ⁴⁹ Agha S et al. (2003). A Quasi-Experimental Study to Assess the Performance of a Reproductive Health Franchise in Nepal, Washington, DC: Abt Associates Inc.
- ⁵⁰ Ishaku SM, Afolabi K, Chace Dwyer S, Okunade F, Uzomba C, Adebayo A, Tobey E, & Jain A. (2018). Examining and Strengthening the Provision of Injectable Contraception in Nigeria. Researcg Report. Population Council, The Evidence Project.
- ⁵¹Chace Dwyer S., Ishaku S.M., Okunade F., Reichenbach L., Jain A. (2018) <u>Feasibility of patent and proprietary medicine vendor provision of injectable contraceptives: preliminary results from implementation science research in Oyo and Nasarawa, Nigeria. *Contraception* 98, 460-462.</u>
- ⁵² Juju, C., Adebayo, S.B., Anyanti, J., Oluigbo, O., Muhammad, F., & Ankomah, A. (2014). An assessment of the quality of advice provided by patent medicine vendors to users of oral contraceptive pills in urban Nigeria. Journal of Multidisciplinary Healthcare, 7.
- ⁵³ BioSpectrum. (2018). <u>Pharmacists' council of Nigeria signs MoUto promote healthcare</u>.
- ⁵⁴Federal Republic of Nigeria. (2021). <u>Online pharmacy regulations</u>.
- ⁵⁵ IFC. (2022). Stepping up in a time of uncertainty: 2022 annual report.
- ⁵⁶ Results for Development. (2021). <u>Journey Guide for Effective Public-Private Engagement in Health</u>.
- ⁵⁷ Country Connector on Private Sector in Health. (2021). What we do.
- ⁵⁸ Health Systems Governance and Financing UHL. (2020). <u>Private sector landscape in mixed health systems</u>. World Health Organization

- ⁵⁹ Joint Learning Network. (2016). <u>Engaging the Private Sector in</u> PHC to Achieve UHC: Advice from Implementers to Implementers.
- ⁶⁰ Health Desk. (2022). <u>FOGSI and NABH partner together to improve maternity care across India</u>. *Financial Express Health Care*.

45 Appendices MSD for Mothers Evidence for Impact 2022